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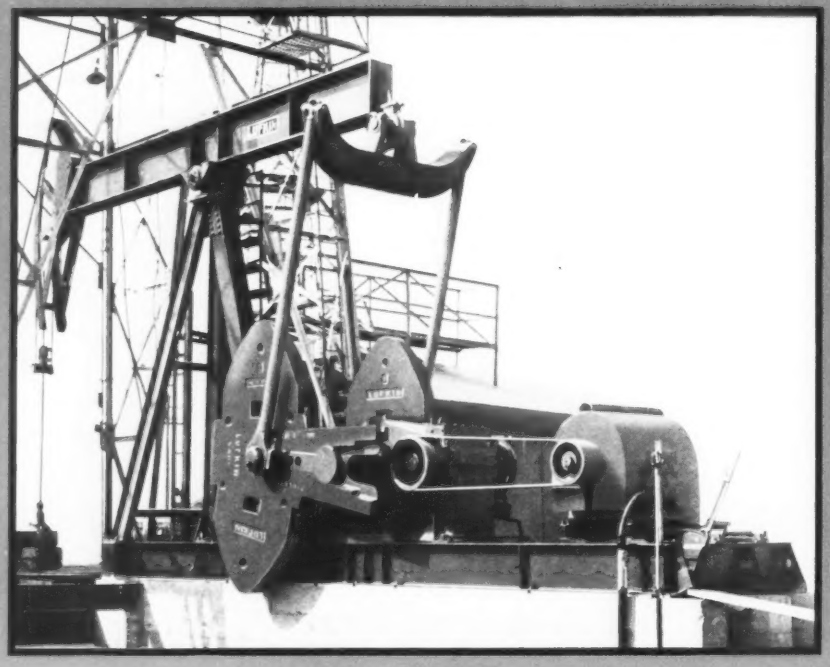

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THE AUTHORITY ON THE CALIFORNIA OIL INDUSTRY

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Current Practices In The Selection Of Oil Field Equipment

Harry H. Power*

The typical sales forces of yesterday are not so remote in the history of oil production that some remnants of past practices have not survived today. Consequently, a comparison of the old and the new may introduce matters entirely familiar to those relatively young in the producing industry.

Those formerly recruited for sales work may be credited with the laying of substantial foundation for present-day practices. However, if the designer of the past arrived at incorrect conclusions, these conclusions may have been formed by reason of unreliable data received from the field. On occasions, investigation of the field angle may have been neglected entirely, with the hope that everything would turn out all right, including the customer's good will and forbearance. With the passing of time, improvements in oil-field equipment have mounted steadily by reason of the combined contributions of engineers, operators, and manufacturers. In addition, a fund of information available only after years of attention of practical details in field and plant has contributed to progress.

A most significant event in the development of oilfield equipment occurred approximately 18 years ago. At that time the Tulsa purchasing agents interested the manufacturers, and soon thereafter the American Petroleum Institute, in the standardization of rig irons. The interchangeability of mating parts by the manufacturers introduced the question of tolerances. Few employees knew exactly what tolerances were satisfactory, especially if the equipment in question was mated with parts made by someone else. Subsequent work on numerous problems concerning standardization has materially reduced experimentation on the part of the manufacturer, with consequent reduction of expense to the producer.

The practical education of the sales engineer today has been based, generally, upon intensive training in the fundamental facts concerning the products manufactured. Some of the equipment companies route the prospective sales engineer through various units of the plant, thereby affording practical experience involving design, metallurgy of steel, fabrication, finishing, and marketing. The prospective sales engineer may have had previous field experience in production. If not, such experience may have been required before permission was granted him to "call on the trade."

A third party has entered the picture in recent years, serving not only as technical advisor to the purchasing departments, but often making the initial investigation of the manufacturer's product. These assistants are not painted as technical robots without human virtues, but they sometimes had an uncanny way of asking questions concerning the merits of the equipment their companies investigated for possible purchase. Such situations probably launched the equipment salesman upon a new adventure of collecting complete data on his wares, available for ready reference. this procedure marked a new era in sales approach and methods.

In selecting equipment, the operator is primarily concerned with satisfactory operation at the lowest cost. He may choose improved roller bearings in lieu of the usual babbit-type, provided the over-all cost is comparatively less. Satisfactory performance is not only judged by the opinions of operators, but should be backed up by adequate records showing initial investment, cost of repairs, and accurately-determined provisions for depreciation, obsolescence, and amortization. It frequently happens that loads and imposed stresses on producing equipment are not definitely known. Hence, accurate records showing details of repairs—and logically grouped for comparison—are often more important in determining the suitability of equipment than the original theoretical considerations of the designing engineer. In the development of new equipment, it may be necessary to keep special trial records in detail, until the development period is terminated and the product demonstrated to be of sufficient merit to warrant routine purchase in company operations. It may also be necessary to conduct special tests under proper supervision, preliminary to adopting the equipment generally. Such tests may be conducted at the manufacturing plant, in the field, or both. The production engineer and the plant designing engineer may work cooperatively, each profiting by the other's knowledge and experience in the design and operation of the equipment under test.

Sucker Rods

A few years ago strings composed of straight 5/8-in. and 3/4-in. sucker rods were used almost exclusively. Later practice demanded tapered strings of 3/4-in. and 7/8-in. rods. Only recently, 1-in. rods have been developed for the top portion of heavily-loaded strings. Simple calculations by the production engineer showed that the unit stress in some strings often approached the endurance limit of the particular steel used. An increase in diameter of rods in the top section of the string seemed to be a logical remedy for reduction of failures. The cross-sectional area of the rod was increased, and the unit stress decreased accordingly to a point well under the endurance limit, with a marked reduction in failures.

Sucker-rod companies are now offering technical service to operators. Wells are weighed by engineers attached to the sales organizations (Fig. 1), and cards showing load characteristics over the pumping cycle obtained with improved polish-rod dynamometers.

Hundreds of records are compiled on rod operation and failures in wells. The Sales engineer is thereby fortified not only with technical, but with actual statistical, details of the greatest value in recommendations made to operators for reduction of rod costs.

One type of sucker rod formerly served all field purposes. However, experience proved the need of various types of steel to withstand stresses imposed while the rods operated under various well environments. The production engineer, therefore, cooperated with the plant metallurgist by testing the various wells, and classified them according to rod type needed for the most economical performance.

Tubular Goods

While detailed data were assembled on sucker-rod stresses and performance, little was known concerning oil-well tubing, regardless of the numerous failures occurring in the heavier pumping wells. Alternate contraction and elongation of the tubing during the pumping cycle contributed to fatigue, particularly in the threaded section. Excessive failures in plain tubing caused operators to insist on upset tubing. The additional metal at the base of the threads decreased materially the number of failures. The upset portion was made long enough to permit re-threading, a common field practice in reclaiming worn and corroded tubing. The pipe manufacturers were interested in the required endurance limits of tubing material, but had no idea of unit stresses present during pumping operations. However, pumping tests were made, eventually, with the

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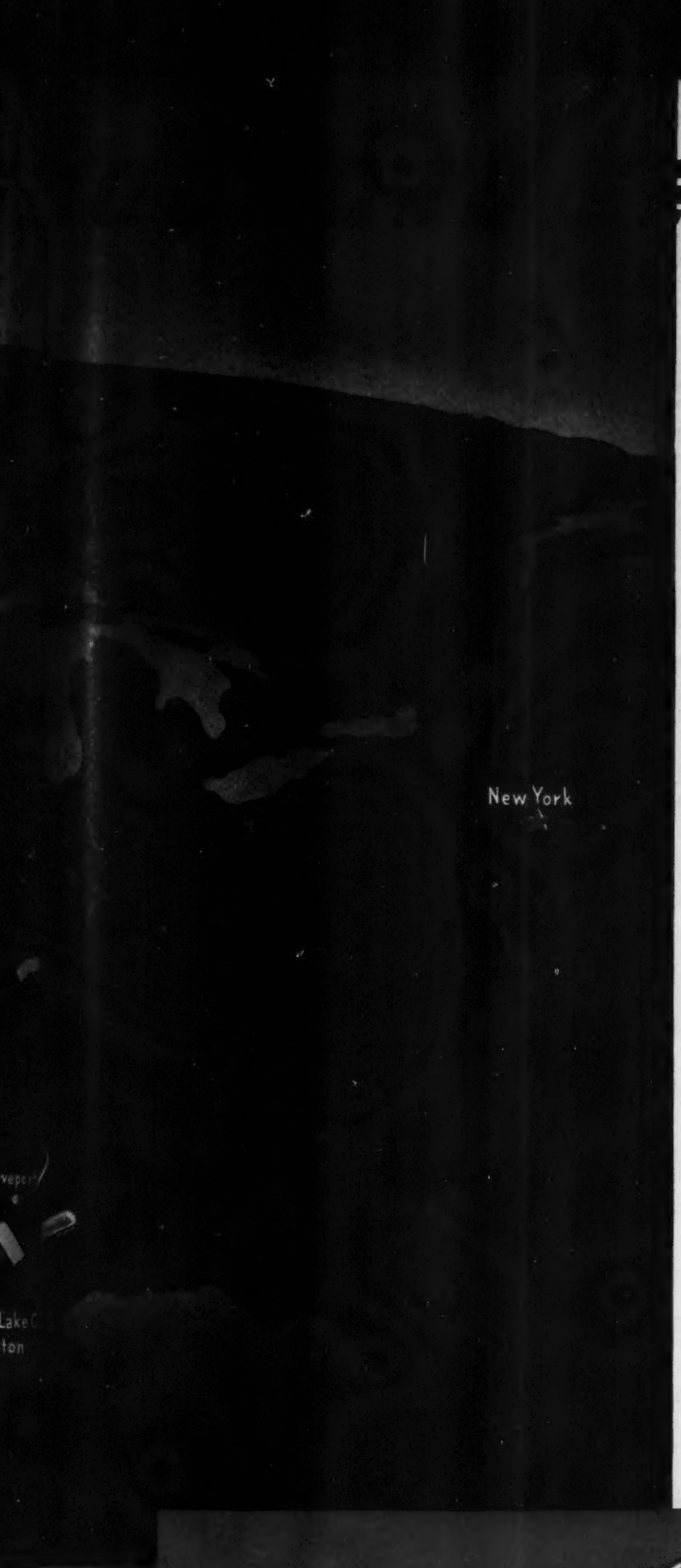

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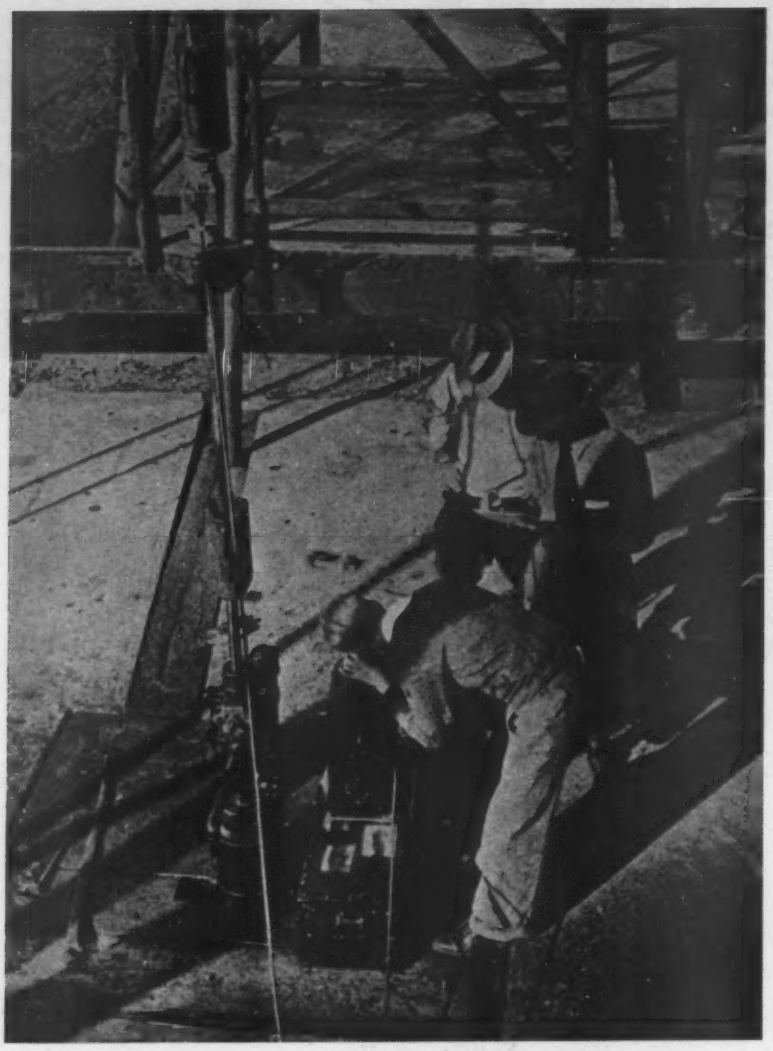

FIG. 1—Cooperative Well Weighing—Compression-Type Electrical Dynamometer.

tubing suspended from a suitable dynamometer. The loads during all portions of the pumping cycle were determined, and unit stresses calculated accordingly. Such tests indicated the advisability of anchoring the tubing in especially difficult wells, thereby reducing the load supported by the top joints, and preventing dropped tubing and the resulting fishing jobs.

Corroded tubing constituted a costly source of trouble, particularly in wells producing hydrogen sulfide and salt water with the oil. Numerous tests have been, and are being, made cooperatively between the operators and the pipe manufacturers—whereby the comparative life of various pipe materials is determined under actual operating conditions, and economic selection thereby facilitated.

Cooperation between operators and manufacturers, resulting in improved products, is well illustrated in the current work of the committees of the American Petroleum Institute on the standardization of oil-country tubular goods. Studies in thread design, number of threads, and tolerances have contributed largely to reduction of leaky joints. Stipulations concerning physical properties of pipe steels, and new mill testing methods to insure tight joints, have been proposed. New codes have been proposed for handling, running, and pulling tubular goods; for methods of pipe inspection; and for the transportation, storage, field use, and reconditioning of tubular goods. Recommendations are also proposed concerning setting depths for casing and tubing. The awakened interest in circumferential welding of casing has led to proposed codes on field-welding technique. Considering the basic importance of pipe in drilling and producing operations, no more significant example of the benefits of joint effort presents itself than of the committees of the American Petroleum Institute concerned with the improvement of pipe design and strength to meet the demands of deeper drilling and the more exacting practices of oil-well operation.

Drill-pipe and wear have not only constituted a major expense in the field, but have been a major manufacturing problem as well. Cooperative efforts have resulted in improved designs of the tool joint and improved field practices, with a consequent reduction of cost per foot of hole drilled. Tests have been proposed, under operating conditions, whereby stresses in the drill pipe may be determined by suitable extensometers placed at intervals along the pipe (Fig 2 and 3).

Two types of recording scratch extensometers have been used in actual drill-pipe service. One type records tensional and compressive stresses. Fig. 3 shows a tension-compression extensometer mounted on an ordinary tensile-test specimen. A scratching device is provided to scribe a series of oscillations on a chromium-plated target. By photographing the record at 100X magnifications, the "strain curves" can be measured and the maximum stresses calculated. Fig. 2 shows a torsion extensometer mounted on a length of drill pipe, together with extensometer housing and rubber protectors. Cooperative tests in the field between manufacturer and user should reveal the magnitude of actual stresses during drilling operations and the frequency of the occurrence of high stresses. Such information should lead to the reduction of drill pipe trouble by proper corrections in the field and at the pipe mills. The field may thus aid the manufacturer by informing him of the strength requirements of drill pipe under unusual loadings. Such practices as welding of tool joints, pressure grips, streamline bores, and integral thread designs illustrate the marked progress made in recent years.

Oil-Well Pumps

Perhaps the production engineer and the sales engineer have cooperated to a greater extent, and considered a greater range of problems concerning oil-well pumping, than for any other phase of producing operations. New types of rod-operated pumps have been placed on trial continuously. Their proclaimed merits have been checked in the field, and conclusions reached after the preparation of detailed comparative records. The high initial cost of one pump may have been offset by the long periods between servicing jobs. Factors may have been present in well operations not forseen by the

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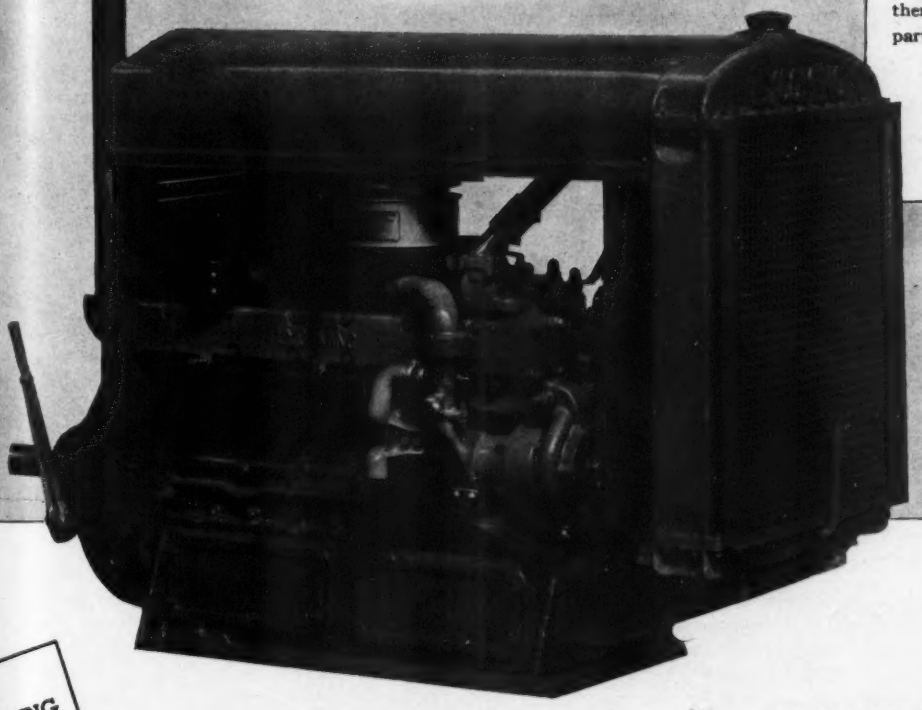

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manufacturer, and satisfactory performance in the field required before sales were assured.

Cooperative field tests are also common with pumping devices actuated by

FIG. 2—Torsion Extensometer Mounted on Drill Pipe.

other means than sucker rods. Preliminary test data may include special gaging facilities, records of fluid levels, bottom-hole pressures, input horsepower requirements, friction losses, operating and maintenance expenses. New equip-

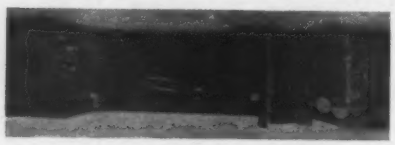

FIG. 3—Tension—Compression Extensometer.

ment is often re-designed after preliminary field tests. Re-design may also be necessary where costs determined dictate changes. For instance, electric motors or internal-combustion engines may be found more economical after all costs have been determined. Unusual well conditions are often difficult to anticipate. For example, paraffin has been an obstacle in the development of a new method of pumping wells. Iron sulfide, clogging the pump parts, proved to be an unexpected impediment in another development. As a result, the original specifications are often altered after the initial tests have been completed, and after comparative report has been assembled by the engineer cooperating on the test.

Pumping Fronts and Pumping Units

A comparison of modern steel pumping fronts with the wooden types of yesterday presents a striking example of cooperative effort between the production and manufacturing engineers. The improved tripod Samson-post and center bearings, interchangeable tail and beam-hanger bearings of the "swivel type," "three-bearings-in-line" steel walking beams, improved beam hangers, and adjustable pitman with roller wrist-pin bearing give evidence of accelerated evolution in engineering design. The countershaft engine to bandwheel drive has received increased attention; and improved makes are readily reversed, and operate at minimum repair costs under the heavier pumping loads. Endless belts have been provided with adjustable idlers, with decrease in trouble and downtime as compared with the operation of open-end belts.

One belting company cooperated with the operators to the end that a definite classification was made of the wells with regard to belt centers. Endless belts were thereby stocked in standard lengths, with profit to the belting company and a smaller warehouse stock for the operator.

Portable single- and double-reduction geared pumping units have appeared in increasing numbers during the past few years. The rating of these units has been largely a matter of field study, attempting to profit by prior failures and putting into the machines adequate factors of safety. Company engineers have conferred with the manufacturers' engineers concerning suitable ratings suggested by the American Gear Manufacturers' formula, which were later adopted by a committee of the American Petroleum Institute. Certainly, the field point of view must be considered seriously in the adoption of satisfactory ratings, and the units designed accordingly.

Although the comparative service of pumping units can be approximated under similar conditions in the field, little is known of the stresses and pressures developed in shafts and gears under actual pumping conditions. It is, therefore, necessary to measure not only the usual polish-rod load and horsepower, but the variation in torque in the gear shafts by means of a suitable torque dynamometer.

Some of the problems investigated with torque dynamometer testing include:

1. The relation of gear torque loads to polished-rod loads.
2. The relation between speed and stroke to polished-rod loads.
3. The effect of type and amount of counterweights on torque loads.
4. The relation of gear loads to engine characteristics.
5. The over-all efficiency of pumping units.
6. The study of multiple well loads and geared units.

Fig. 4 and 5 show the torque dynamometer and gear box, including the recorder drive and the tachometer magneto. A magnetic-type strain gage is mounted within a floating sheave on the high-speed gear shaft. A torque arm is mounted rigidly on the same shaft. The torque is transmitted from the pully through this strain gage, and measured; and then to the torque arm driving the high-speed gear shaft. It will be noted that the recorder drive permits taking the polish-card, the torque dynamometer card, and the tachometer card in relation to crank angle instead of the usual polish-rod load.

Fig. 6 shows results obtained with the gear-shaft torque dynamometer. Curve 1 shows the torque due to the polish-rod load. Curve 2 shows the torque due to counterweights. The net difference is the theoretical gear torque shown as a dotted line in curve 3. The recorded gear torque is taken from the photographic record from the torque dynamometer. The relation of recorded to theoretical torque, and the effect of engine impulses on torque load, are clearly indicated.

The encouraging results obtained from the aforementioned tests, conducted cooperatively by manufacturing and production engineers in the field, provides a striking illustration of progress possible in pumping equipment; also the indication of the need for further investigation along definite lines in the near future.

When the designer came to the field and investigated personally the operator's point of view, progress in the practical design of oil-field internal-combustion engines accelerated greatly. He learned, first-hand, of field operating conditions involving speed and speed ratios, counter-balancing, improper alignment of crankshafts, faulty ignition, improper mixing of fuel, inadequate lubrication, scale-encrusted water-jacket passages, regulation, and general safety features present for protection of workmen. Perhaps one of the most important observances was the accessibility of the engine for ordinary repairs by the help usually available around the lease.

The production engineer has contributed to progress by determining the engine horsepower requirements of pumping wells with the polished-rod dynamometer, and selecting speed ratios between engine and crank that permitted most efficient operation of the engine.

Careful records kept by the production engineer on engine operating and maintainence costs proved invaluable for comparing the relative economies of various makes. In addition, the production engineer learned to compare the relative ruggedness of engines, and drew obvious conclusions concerning their probable useful lives.

A marked improvement in well-head connections and manifolds has occurred in recent years, due largely to the cooperative efforts of producer and manu-

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to right: C. G. Willis, president of Basin Oil Co., and J. M. Dwyer, in charge of drilling operations. gratulations to Basin Oil Co. on the successful completion of its Potrero No. 1 well in the Potrero on which H. C. Smith drilling tools were used. The well is now flowing 494 bbls. daily of 48 ity oil, cutting 0.6%, and 500,000 cu. ft. of gas through 16/64 in. bean. Pressures are 540 lbs. on tubing and 1040 lbs. on the casing.

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facturer. As a result, proper coordination is promoted throughout the drilling and completion periods—including the use of equipment while needed, and its removal when the individual functions have been completed. Control has been maintained while changing to other equipment with increased operating safety, efficiency, and convenience. Subsequent features, such as raising and lowering tubing under pressure, setting of packers, and provision for repairs to parts, have been anticipated in the new designs. The length of time required to install manifolds has been decreased, with a corresponding uniformity of strength throughout the assembly. As a result, savings in inventory of materials have been effected through simplification of the assembly, and through the elimination of unnecessary parts.

Tankage

Marked progress has been manifested during the past 10 years in the design and fabrication of riveted, welded, and bolted steel tankage for oil-storage purposes. A vast amount of cooperative work has been done by manufacturers' and producers' engineers working with the committees of the American Petroleum Institute on "standardization of steel tanks for oil storage." The problems of portability, minimum leakage, and high reclaim value are approaching practical solution. Committee recommendations include permissible working stresses in tension, shear, and bearing; capacities proposed for bolted and welded tankage; details of welding and other constructional features; and reduction of personnel and equipment hazards.

Corrosion losses in hydrogen-sulfide areas encouraged field tests of galvanized steel, galvanized wrought iron, and wooden tankage—with interest centered by producer and manufacturer jointly on results and the probable savings involved, comparing the various types under test (Fig. 7). Other problems in oil storage and tankage such as those concerning evaporation losses, protection from fire, facilities for filling and draining, and gaging practices, are the result of cooperative effort, and too well known to warrant additional discussion herein.

Derricks

Progress in steel-derrick design and manufacture, and the excellent work of the committees of the American Petroleum Institute on the standardization of standard rigs and derricks, are subjects worthy of intensive study. Derricks have not only kept pace with the requirements of deep wells insofar as hoisting speed and capacity requirements are concerned, but have been fabricated from steels of higher physical properties —with the possibility of lighter sections for the same strength. If necessary, added capacity may be obtained by employing stronger steels, such as silicon steel, but by retaining or increasing the cross-sectional areas of the structural members. The unfailing performance of steel derricks under combined static and "shock" loads encountered in drilling deep wells is striking testimony of the constructive efforts made by operators and manufacturers in the solution of a common problem.

Rotary-Drilling Equipment

Change is ever present in rotary equipment. Witness the items comprising a drilling outfit, that have been set aside as "obsolete" before their useful life has been finished. This history and the part that new designs have played in the search for oil at depths below 13,000 ft. are well known. Demands have come from the field for steels of increased physical properties, and these demands have been answered by the plant metallurgist. The operators have shown the importance of various drilling controls to insure straight holes and minimum trouble with drill pipe and bits. The plant engineers have solved these problems by designing differential drives, weight and torque indicators, tachometers, improved drill collars, and drilling bits.

The economics of transportation have been explained to the manufacturer, with the result that unitized parts have been provided to facilitate moving and rapid installation. Possible savings in water and fuel have brought about marked changes in boiler, feedwater heater, superheater, and steam-engine design (Fig. 8). For other operations, the internal-combustion engine and the electric motor have proved their efficiency.

Mention must also be made of the committees of the American Petroleum Institute concerned with rotary-drilling equipment. Consider a few items recently under discussion: integral tool-joint threads on grief stems; standards on slush pumps; standards on brake blocks and bands; standards on rotary hose, transmission chain, and wire-rope sheaves; and the new internal-flush full-hole tool joint for use with external-upset drill pipe.

The list is long, but no better illustration of work from the two ends and toward a common purpose can be offered than that of improvement in the many phases of rotary-drilling equipment.

Counterbalances

Proper counterbalancing of pumping wells is a problem of mutual concern to producer and manufacturer. The producer is concerned with proper pumping motion, savings in power costs, and decrease in maintenance expense. In addition, both producer and manufacturer are concerned with proper type, design, and rating of counterbalance to approach most effectively the desired field performance. The many variables entering the counterbalancing problem often require more than theoretical analysis. Carefully-planned field tests are performed, and data gathered on polish-rod loads and horsepowers, crankshaft torques, speed and inertia variations, fluid levels,

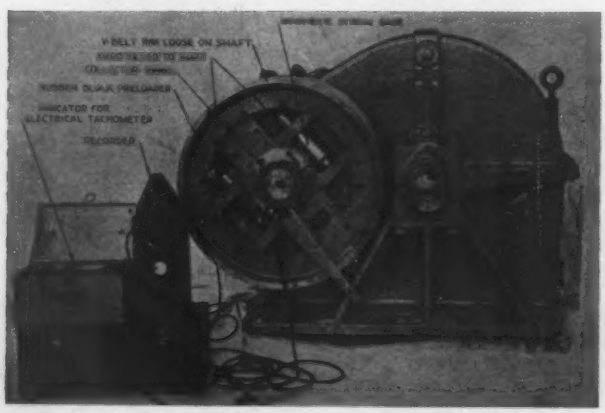
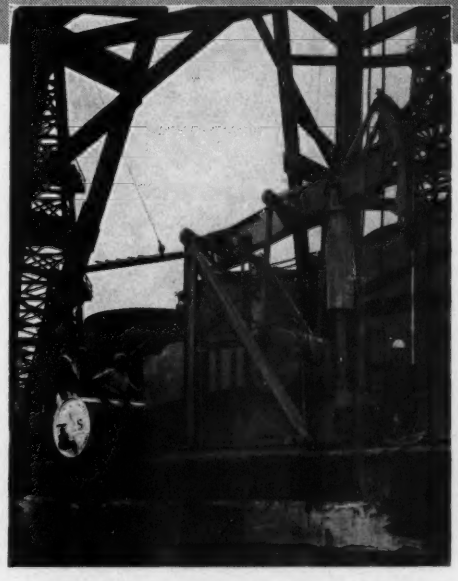


FIG. 4—Torque Dynamometer.

FIG. 5—Testing Reduction Gear.



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pumping pressures, acceleration effects, and repair items. Analysis of such data may indicate the proper type and amount of counterbalance to use; or it may indicate the need of more than one type, operating together for the best results.

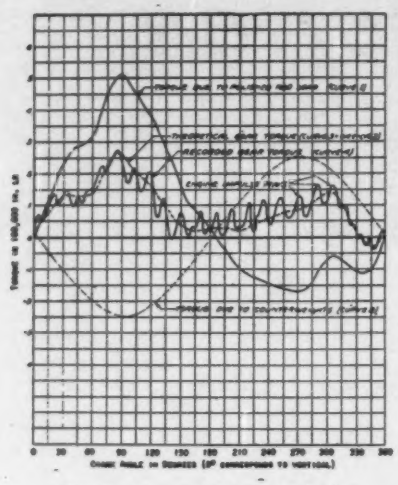

FIG. 6—Torque and Polish-Rod Dynamometer Curves

A real effort has been made in recent years by manufacturer and producer to solve jointly this problem with cooperative and exhaustive field tests.

Separators

Although oil and gas separator design has progressed rapidly from the manu-

FIG. 7—Cooperative Corrosion Test of Tank Materials.

facturer's efforts, yet the critical tests in the field have been conducted jointly, with mutual concern, regarding the capacity to handle the required volumes with efficient separation. Progress has also been made in the design of the equipment, with particular attention to its strength as an unfired pressure vessel. Fully automatic controls and improved safety valves have proved their worth to the field through reduction of operator attendance and hazard.

Au interesting illustration of practical cooperation on separator problems concerns the use of "drilling-in" separators as used in the Oklahoma City Field (Fig. 9). The great amount of trouble encountered with sand cutting is well known. The regular separators furnished the field originally sometimes cut out within 15 min. after the well had been opened. After several proposed remedies, it was concluded finally that the most effective means of reducing the cutting of sand was by using larger inlets in order to reduce the velocities of the sand-laden fluids. In addition to using the larger lines, lead-covered plates and diverters helped to give minimum cutting and continuous operation.

Conclusion

It is impossible to list the many equipment problems confronting the producer today. The many specifications and standards for equipment of the American Petroleum Institute indicate the volume of work, directed jointly by producer and manufacturer, towards a common objective. The sales engineer has grown to be a specialist and consultant, and the producer has profited accordingly. The production engineer has learned much of design and factory methods. Accordingly, he has helped harmonize the manufacturer's idea of what he is selling with the producer's idea of what he is buying (Fig. 10).

Not many years ago the drilling of a well to 10,000 ft. was considered more or less fantastic. Today wells are drilled to 13,000 ft., and depths of 15,000 ft. or more are not impossible in the near future. The operators, manufacturers, and engineers — with their combined resources and knowledge of materials, design, and past performance—are prepared to move ahead to new fields of conquest. It is believed that no more fascinating program exists than that of developing improved materials and designs, to meet demands from the field increasingly difficult, in the accelerated search for petroleum today.

Acknowledgment

Acknowledgement is gratefully made to the following for material used in the preparation of this paper: Messrs. L. K.

FIG. 8—Test Set-up for Modern Oil-Field Boiler.

TRET-O-LITE

LEADERSHIP

. . . is maintained year after year by the constant striving of the entire organization to serve every user in the most efficient way possible. Regardless of the size of your treating problems, you are assured of the maximum of attention and service.

TRETOLITE COMPANY

Manufacturing Chemists

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Representatives in all Principal Fields

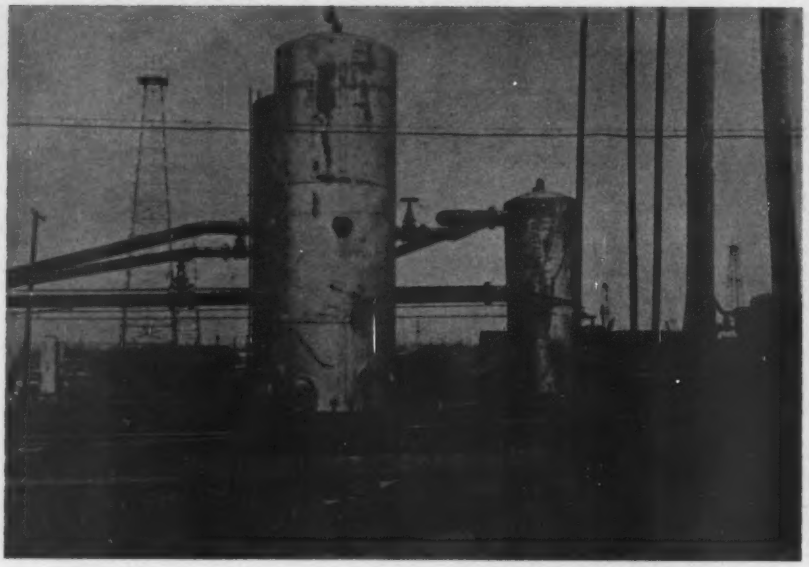


FIG. 9—"Drilling-in" Separator, Oklahoma City Field.

Browning, The S. M. Jones Company; Howard Texter and Clemons Roark, The National Supply Company—Spang Chalfant Division; Roscoe Ayers and J. R. Mahan, The National Supply Company; Dr. Emory Kemler, Gulf Oil Corporation; also to Messrs. Jack Durkee, The A. M. Byers Company; John Fuller, Oil Well Supply Company; Earl Byers, The Parkersburg Rig and Reel Company; Jay

FIG. 10—The Sales Engineer Studies Field Problems.

Walker, National Tank Company; Arthur E. Crockett, Jones and Laughlin Steel Corporation; W. W. Trout, Lufkin Foundry and Machine Company; and C. A. Young, American Petroleum Institute.

●

The foregoing paper was an American Petroleum Institute Presentation.

●

Houston Oil Show Announces Dividends

A refund of 5% which is in addition to a previous refund of 20% was mailed the exhibitors in the 1937 Oil-World Exposition early in June. This is in accordance with the policy of the Exposition which is a non-profit enterprise organized for educational purposes only. Plans for the next show to be held April 24 to 29, 1939, provide for even greater facilities in offering the oil men of this and other countries an opportunity to inspect and study the developments made in modern tools and machinery for all branches of the oil industry.

The Oil-World Exposition, Inc. has a membership of 343 oil men, supply men, manufacturers and distributors of oil equipment. The board of directors has been advised by a number of additional prospective members that they wish to join in time for the annual meeting of the entire membership which was held on June 7 in the Rice Hotel at Houston. The memberships are for a period of five years and are $25.00 each. Each membership is in the name of the individual and no company is allowed to have more than ten memberships in the organization.

The enlargement of the exhibiting facilities, both inside and out, has been planned well in advance since the necessity for such enlargement was clearly indicated at the 1937 Show where even the added space provided was hardly adequate. All indoor exhibits at the 1939 Show will be in permanent buildings with the space available being able to accommodate 938 booths. The outdoor space will be increased by approximately 50%, announced E. G. Lenzner, general manager of the Oil-World Exposition, Inc. The location of the Oil-World Exposition in Houston, Texas makes it possible for the greatest number of oil men to see the display and demonstration of equipment which is vitally important for their operations with the least inconvenience and minimum expense.

J. Clarence Perkins, Oil Pioneer, Dies

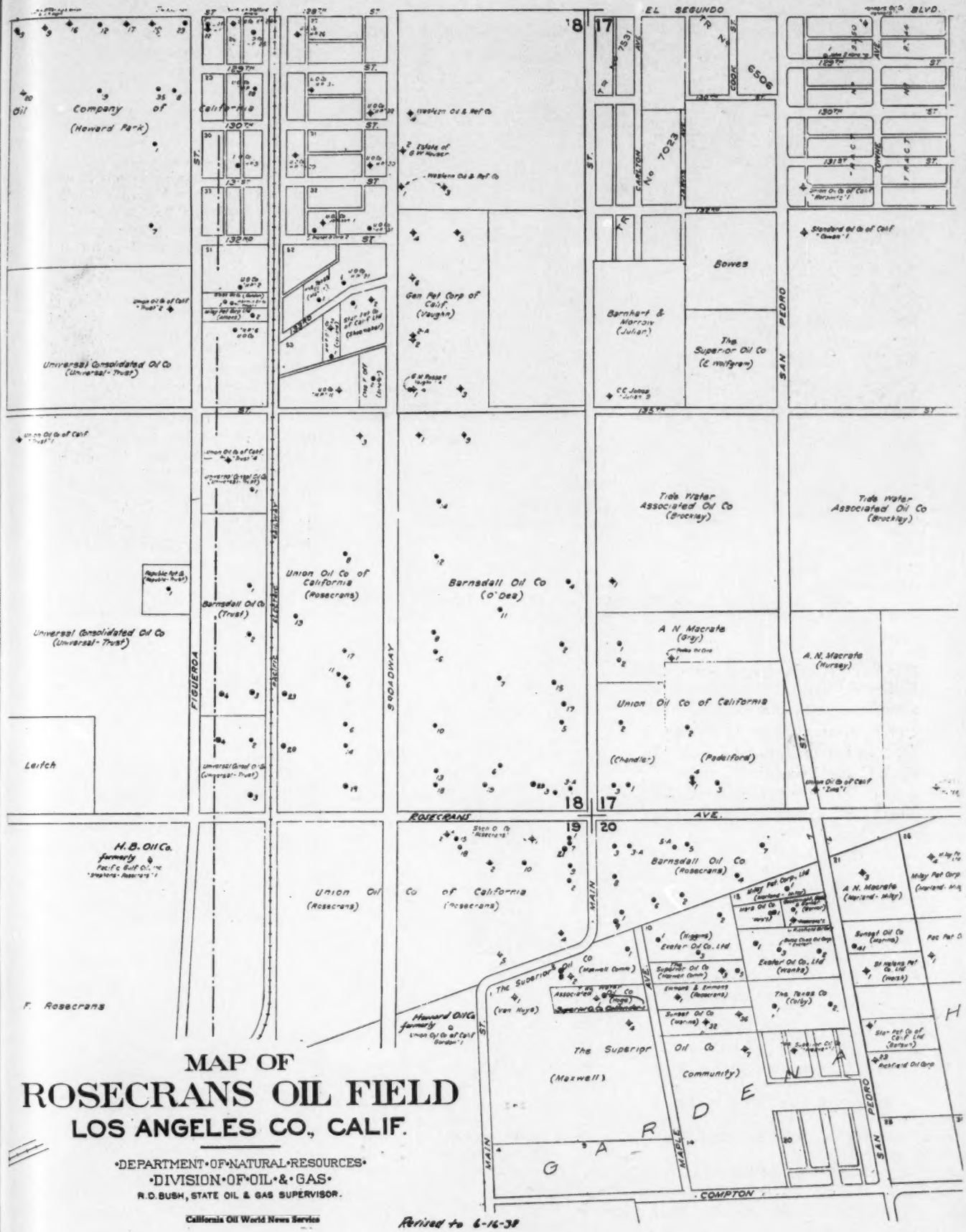
J. Clarence Perkins, field manager of Perkins Cementing, Inc., and widely known in oil circles throughout California and the Rocky Mountain States,

died at St. Joseph's Hospital, Orange, Calif., on June 3rd, after an illness of several months. Familiarly known as "Cy" to his numerous friends, he had for years been prominent in the development of oil well cementing. His father, A. A. Perkins, of Los Angeles, who survives him, was the inventor of the Perkins Process.

Clarence Perkins started with his father in the cementing business in 1911, and has been continuously with Perkins Oil Well Cementing Co. and its successor, Perkins Cementing, Inc., since that time. Many of the improvements in cementing methods and outfits are the result of his active interest in the business.

In addition to his father, he leaves two sisters, Mrs. L. J. Whitney and Mrs. James A. Byrnes, both of Los Angeles.

Recent studies show that out of each dollar spent by motor tourists approximately 20 cents goes toward transportation expense.



MAP OF
ROSECRANS OIL FIELD
LOS ANGELES CO., CALIF.

•DEPARTMENT•OF•NATURAL•RESOURCES•
•DIVISION•OF•OIL•&•GAS•
R. D. BUSH, STATE OIL & GAS SUPERVISOR.

California Oil World News Service

Revised to 6-16-38

H. R. Linhoff

C. N. G. A. Election - Frolic

Election of H. R. Linhoff, of Richfield Oil Co., as new president of the California Natural Gasoline Association, and P. S. Magruder, of General Petroleum Corp., as vice president, was announced by J. C. Burks, of O. C. Field Gasoline Corp., at the annual Frolic of the association, June 11, at the Girard Country Club. Four new directors were placed on the board. These were B. D. Balthis, of Natural Gas Equipment, Inc.; A. C. Lyles, of KNDA; G. C. McLaren, of Standard Oil Co. of California, and L. M. Windle, of Richfield Oil Co.

Directors reelected were the following: J. C. Burks, retiring president; J. A. Campbell, of Lomita Gasoline Corp.; L. V. Cassady, of Lomita Gasoline Corp.; F. E. Coyle, of Tide Water Associated Co.; Earle Derby, of Standard Oil Co. of California; O. C. Field, of O. C. Field Gasoline Corp.; J. C. Gilbert, of Barnsdall Oil Corp.; R. H. Green, of Signal Oil Co.; W. A. Kirk, California Southern Oil Co.; B. A. Koehler, of Getty-Pacific Western; W. H. Kraft, of Honolulu Oil Corp.; R. S. Lytle, of Los Nietos Producing Co.; William Moeller, Jr., of Southern California Gas Co.; H. E. Moulton, of C.C.M.O.; N. H. Mull, of The Texas Co.; W. D. Roper, of Western States Gasoline Co.; T. L. Taggart, of Standard Oil Co. of California; Henry N. Wade, of Parkhill-Wade.

More than 300 members and guests journeyed out Ventura Boulevard to Girard Country Club Saturday, June 11, 1938 to attend the Annual Frolic of the California Natural Gasoline Association, an all day affair lasting from early morning through the evening.

Most everyone went in for one sport or another, there being about 140 golfers, several full sized soft ball teams and a goodly turn-out for tennis, horseshoes and badminton. "Indoor sports" conducted by the Fluor brothers were well supported, though it is understood the results left something to be desired by the brothers. Swimming was also available but the minimum of sunshine discouraged this sport.

Free beer available at several places around the club grounds was consumed in considerable quantities and the boys did not stint in their patronage of the bars located in the club house and rumpus house. A loud speaker with "mike" and phonograph attachment, furnished through the courtesy of one of the Association's staunch supporting companies did much to enliven the gathering and simplify the making of announcements as well as provide sound facilities for the stage show.

Dinner was served by caterers in the early evening. The food, served hot from portable steam tables, was plentiful and very well cooked and seemed to "hit the spot" after a hard day of sports. The three service lines permitted the handling of the crowd in fast time.

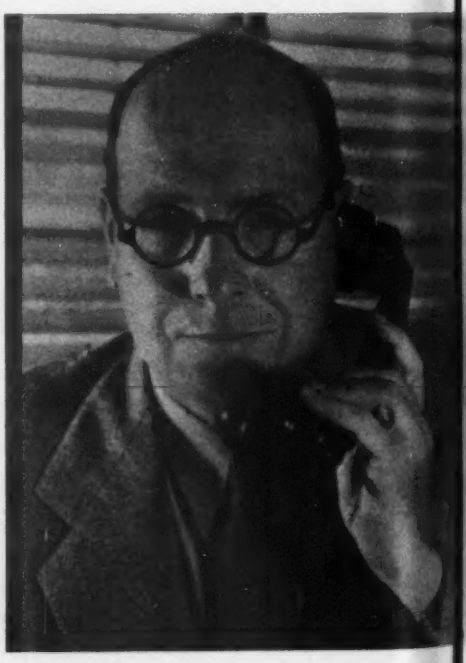
The show, following dinner, was staged on an outdoor platform adjacent to the eating tables. A four piece orchestra accompanied the various dancing and singing numbers of the program. A little, blonde mistress of ceremonies took charge and things promptly began to prove entertaining in a big way. Things came off in good fashion and there seemed to be an earnest desire on the part of the performers to please the audience. Prizes were awarded the winners of the various sports events during the day as follows:

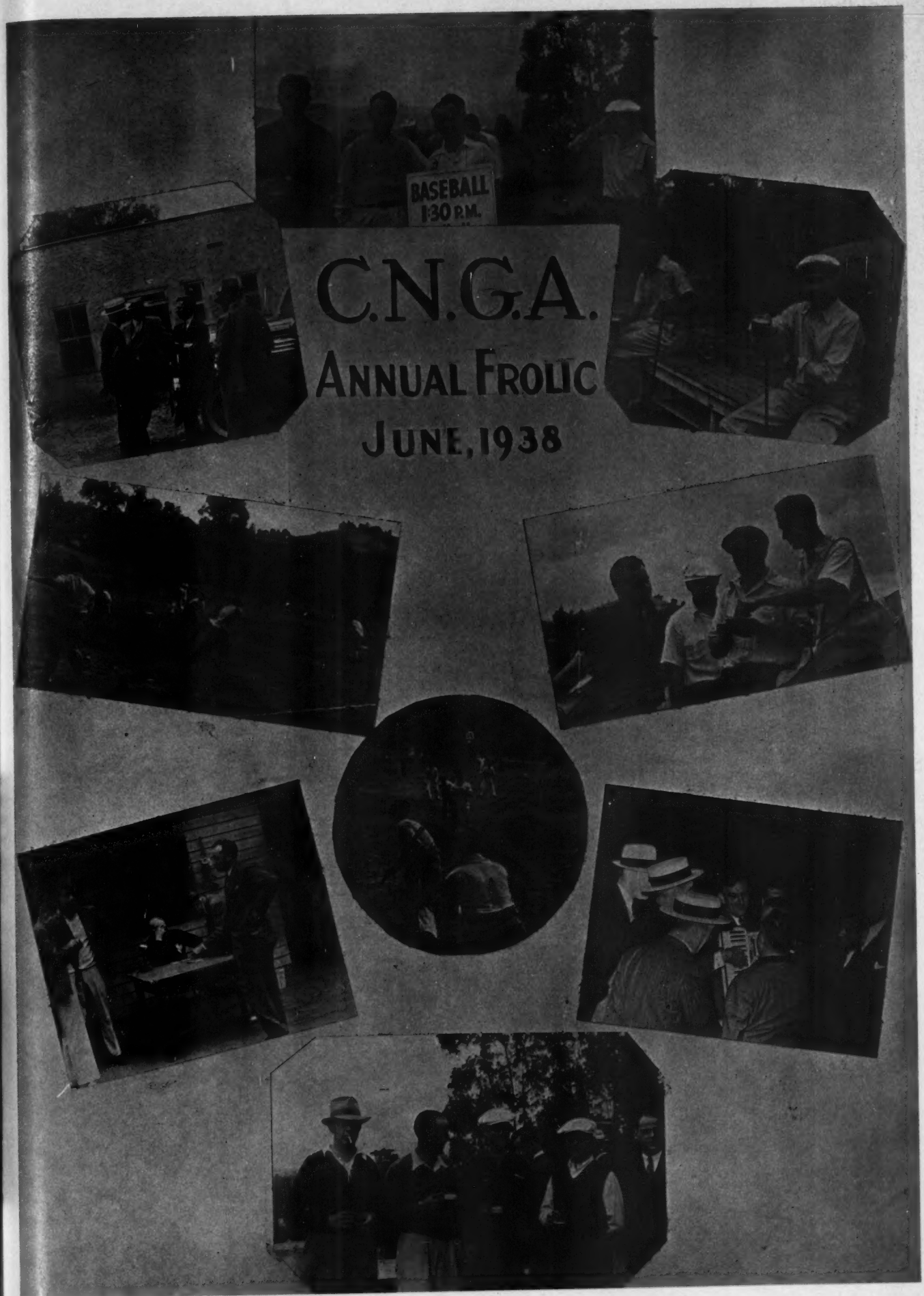
GOLF

Low Gross:	Frank Stevens	71
Low Net:	Tom Beauchamp	61
	Dud Hill	61
Low Net:		
0—12	H. Meredith	67
13—18	M. V. Moulton	63
19—24	Bert Rico	66
	E. Henderson	66
25 up	L. Winters	65
Blind Bogey:	R. A. Nevers	
	Dan McPherson	
	E. Lorenz	
	W. A. Russell	
	Frank Dolley	
	Gordon Greene	

(Continued on page 25)

P. S. Magruder




BASEBALL
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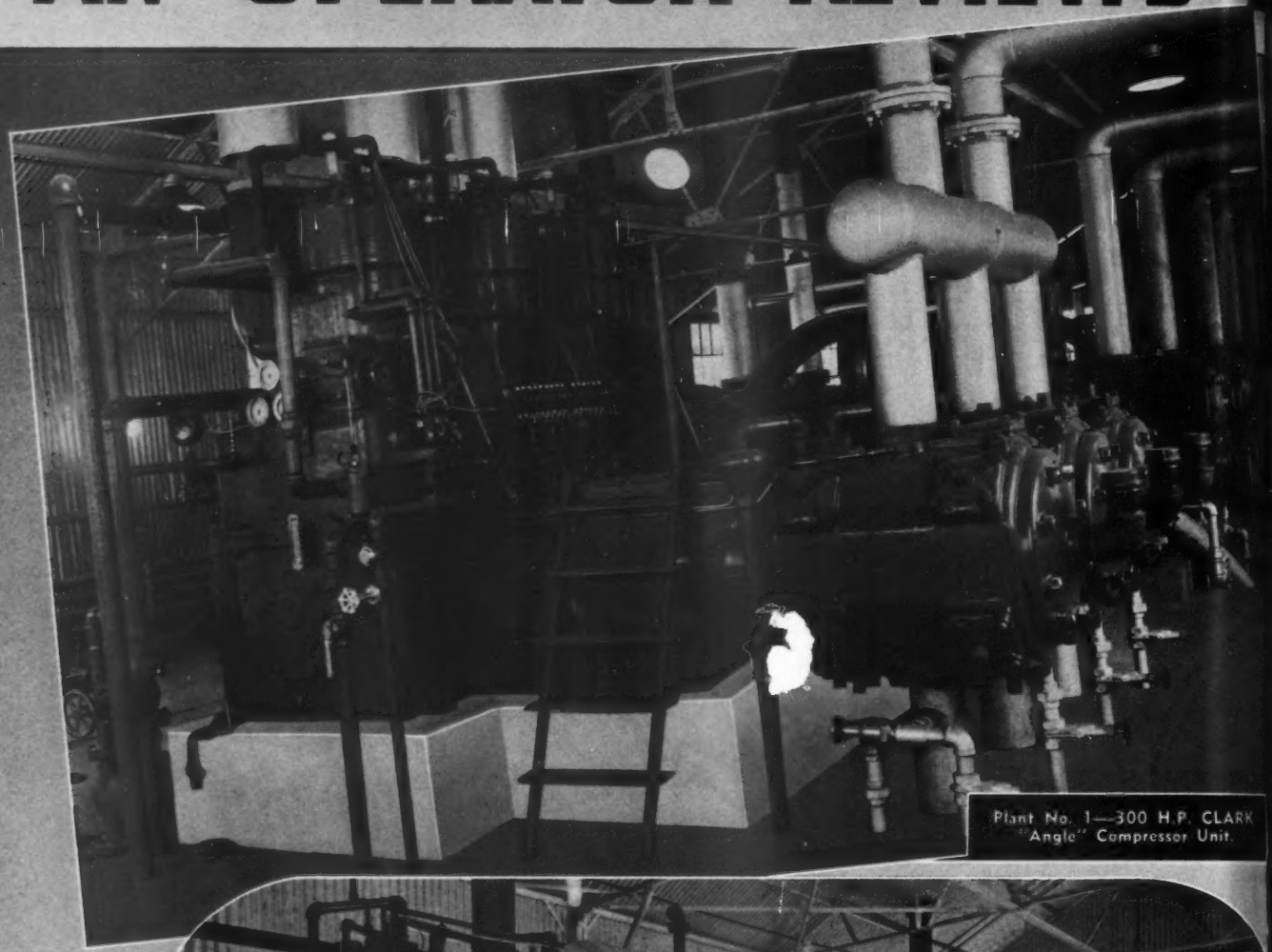
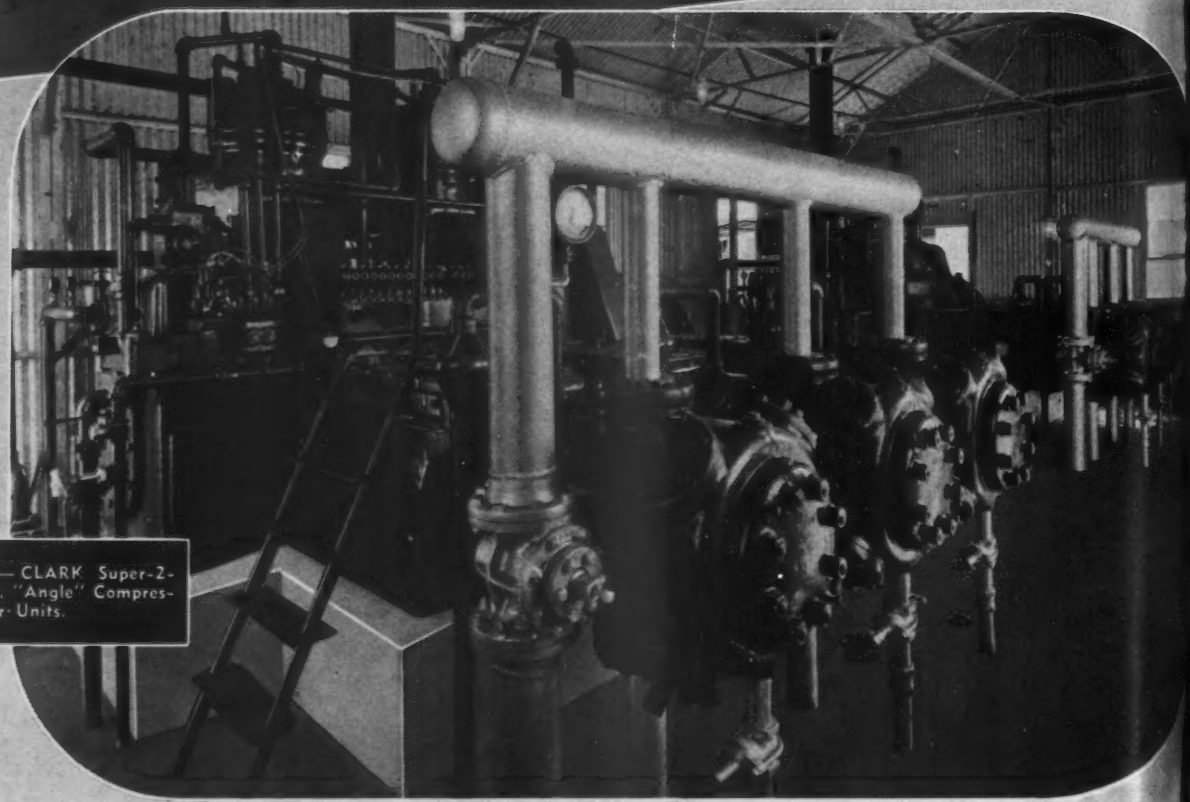
C.N.G.A.
ANNUAL FROLIC
JUNE, 1938

AN OPERATOR REVIEWS



Plant No. 1—300 H.P. CLARK "Angle" Compressor Unit.

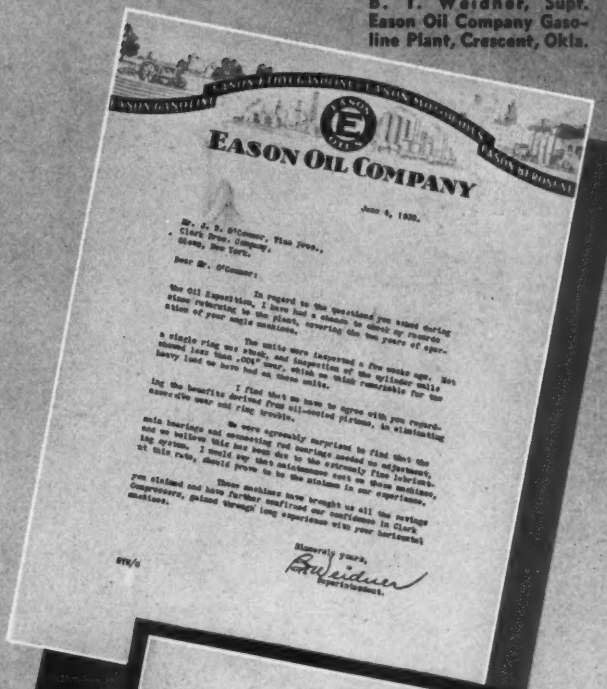


Plant No. 2 — CLARK Super-2-Cycle 300 H.P. "Angle" Compressor Units.

YEARS of "ANGLE" SERVICE

Less Than .004" Cylinder Wear—No Bearing Adjustments—After 2 Years Under Heavy Load!

B. T. Weidner, Supt. Eason Oil Company Gasoline Plant, Crescent, Okla.



EASON OIL COMPANY

June 4, 1930.

Mr. J. D. O'Connor, Vice Pres.,
Clark Bros. Company,
Olean, New York.

Dear Mr. O'Connor:

In regard to the questions you asked during the Oil Exposition, I have had a chance to check my records since returning to the plant, covering the two years of operation of your angle machines.

The units were inspected a few weeks ago. Not a single ring was stuck, and inspection of the cylinder walls showed less than .004" wear, which we think remarkable for the heavy load we have had on these units.

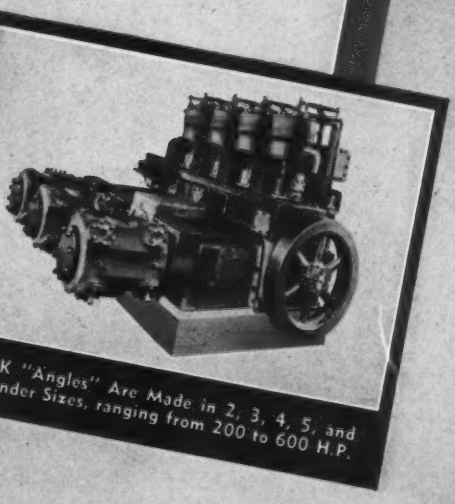
I find that we have to agree with you regarding the benefits derived from oil-cooled pistons, in eliminating excessive wear and ring trouble.

We were agreeably surprised to find that the main bearings and connecting rod bearings needed no adjustment, and we believe this has been due to the extremely fine lubricating system. I would say that maintenance cost on these machines, at this rate, should prove to be the minimum in our experience.

These machines have brought us all the savings you claimed they would and have further confirmed our confidence in Clark Compressors, gained through long experience with your horizontal machines.

Sincerely yours,
B. T. Weidner
Superintendent.

BTW/O



CLARK "Angles" Are Made in 2, 3, 4, 5, and 6-Cylinder Sizes, ranging from 200 to 600 H.P.

WHAT CLARK "Angle" Compressors not only effect the great initial ... savings which we have claimed—but that they stand up in actual ...rvice—has been proved in every instance where they have been in ...eration long enough to constitute a test. Eason Oil Company was ...mong the first to install CLARK "Angles," 2 years ago. Note what ...pt. B. T. Weidner, of their Crescent, Oklahoma, Gasoline Plant says ... the "staying qualities" of these machines:

"In regard to the questions you asked during the Oil Exposition, I ...ve had a chance to check my records since returning to the plant, ...vering two years of operation of your angle machines.

"The units were inspected a few weeks ago. Not a single ring was ...k, and inspection of the cylinder walls showed less than .004" ...ar, which we think remarkable for the heavy load we have had ... these units.

"I find that we have to agree with you regarding the benefits derived ...m oil-cooled pistons, in eliminating excessive wear and ring trouble.

"We were agreeably surprised to find that the main bearings and ... connecting rod bearings needed no adjustment, and we believe ...s has been due to the extremely fine lubricating system. I would ...y that maintenance cost on these machines, at this rate, should ...ove to be the minimum in our experience.

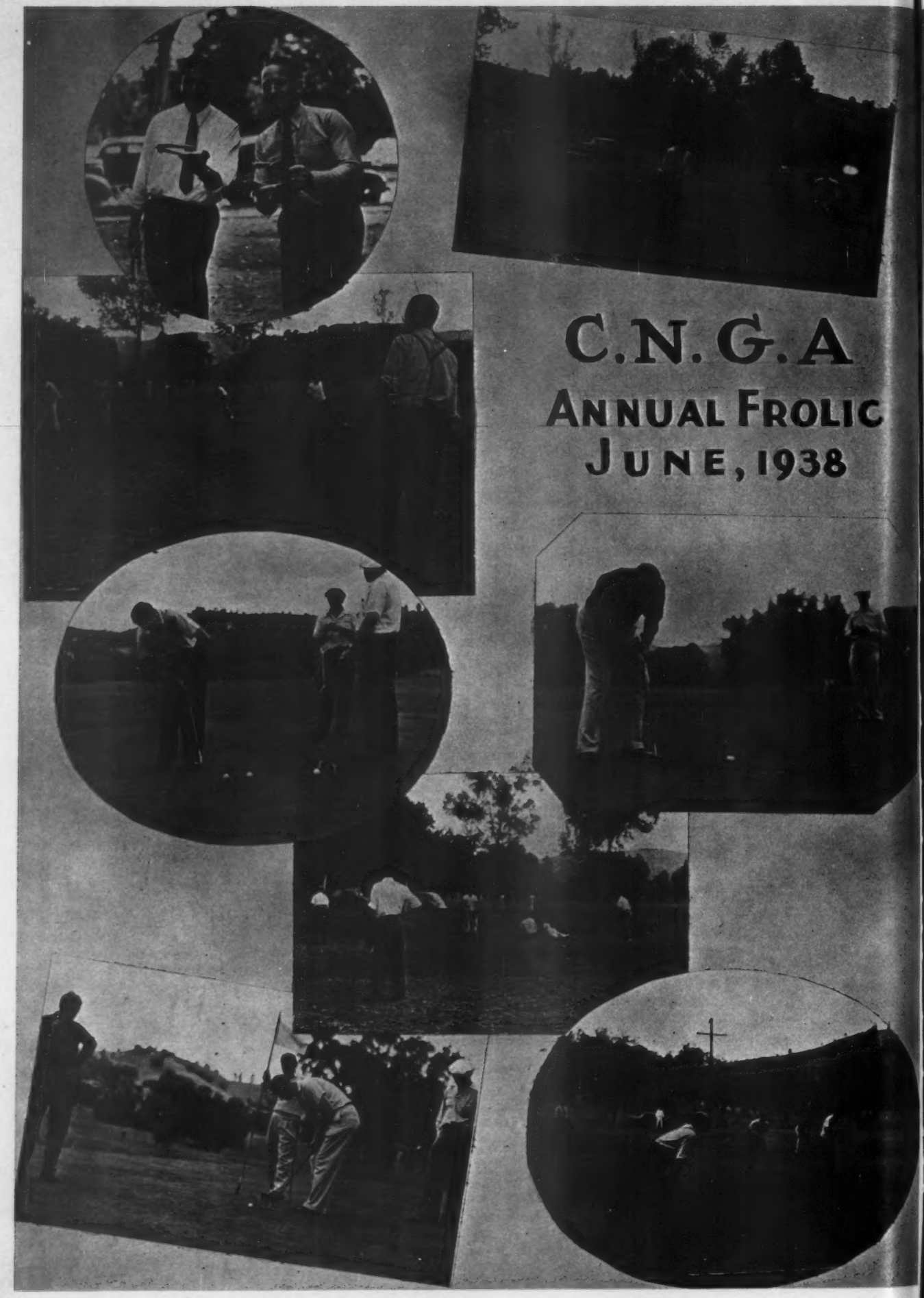
"These machines have brought us all the savings you claimed they ...uld and have further confirmed our confidence in Clark Compres...rs, gained through long experience with your horizontal machines."

CLARK "Angles" bring the savings of shipment assembled, small ...undations and buildings, and fuel saving through CLARK patented ...el Injection—PLUS assured in-built durability and low maintenance. ...ndsome new catalog now ready for mailing.

...LARK BROS. COMPANY . . . . . OLEAN, NEW YORK, U.S.A.

Smith-Booth-Usher Co.
LOS ANGELES, CALIF. — PACIFIC COAST DISTRIBUTORS

CLARK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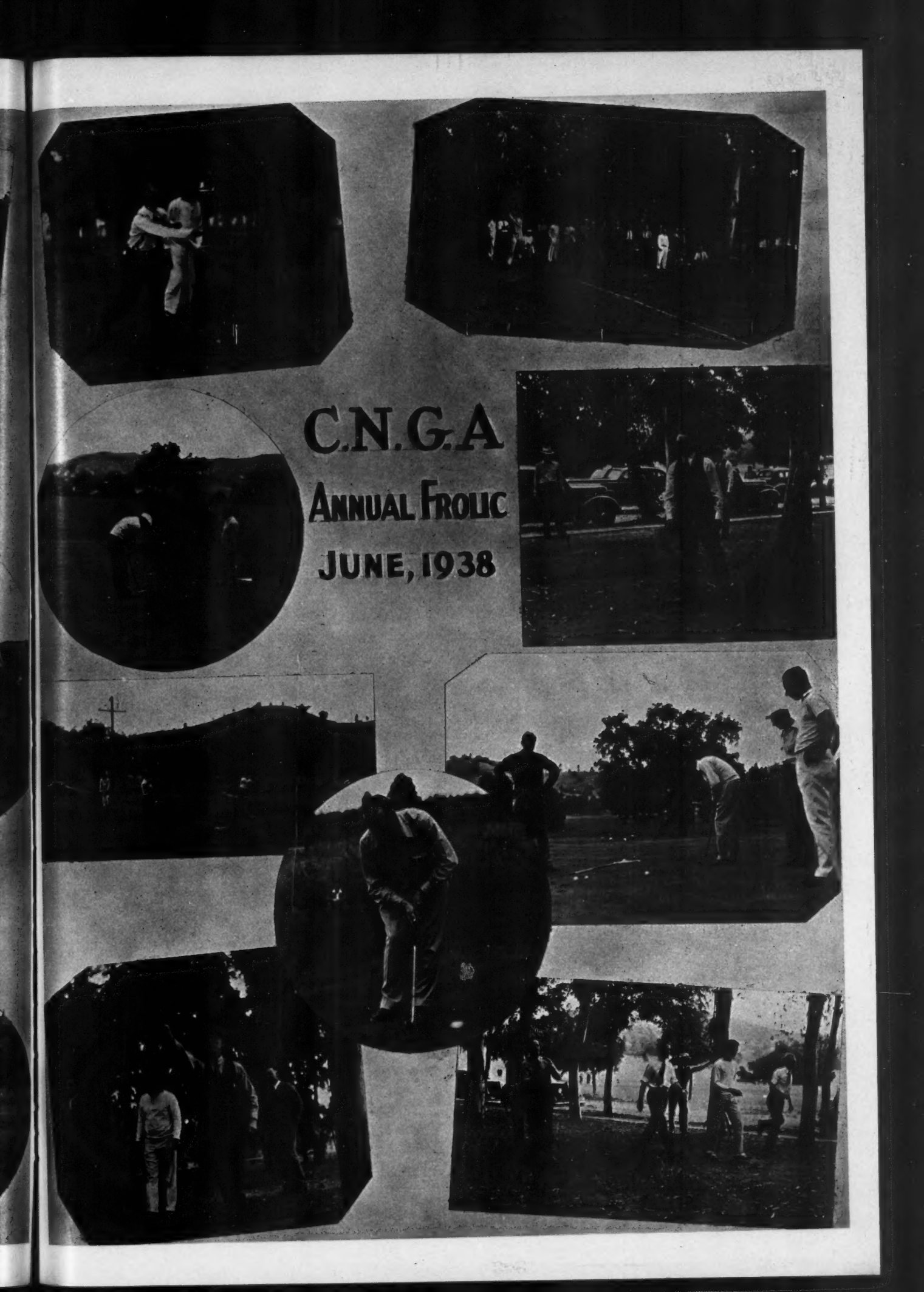
ANNUAL FROLIC
JUNE, 1938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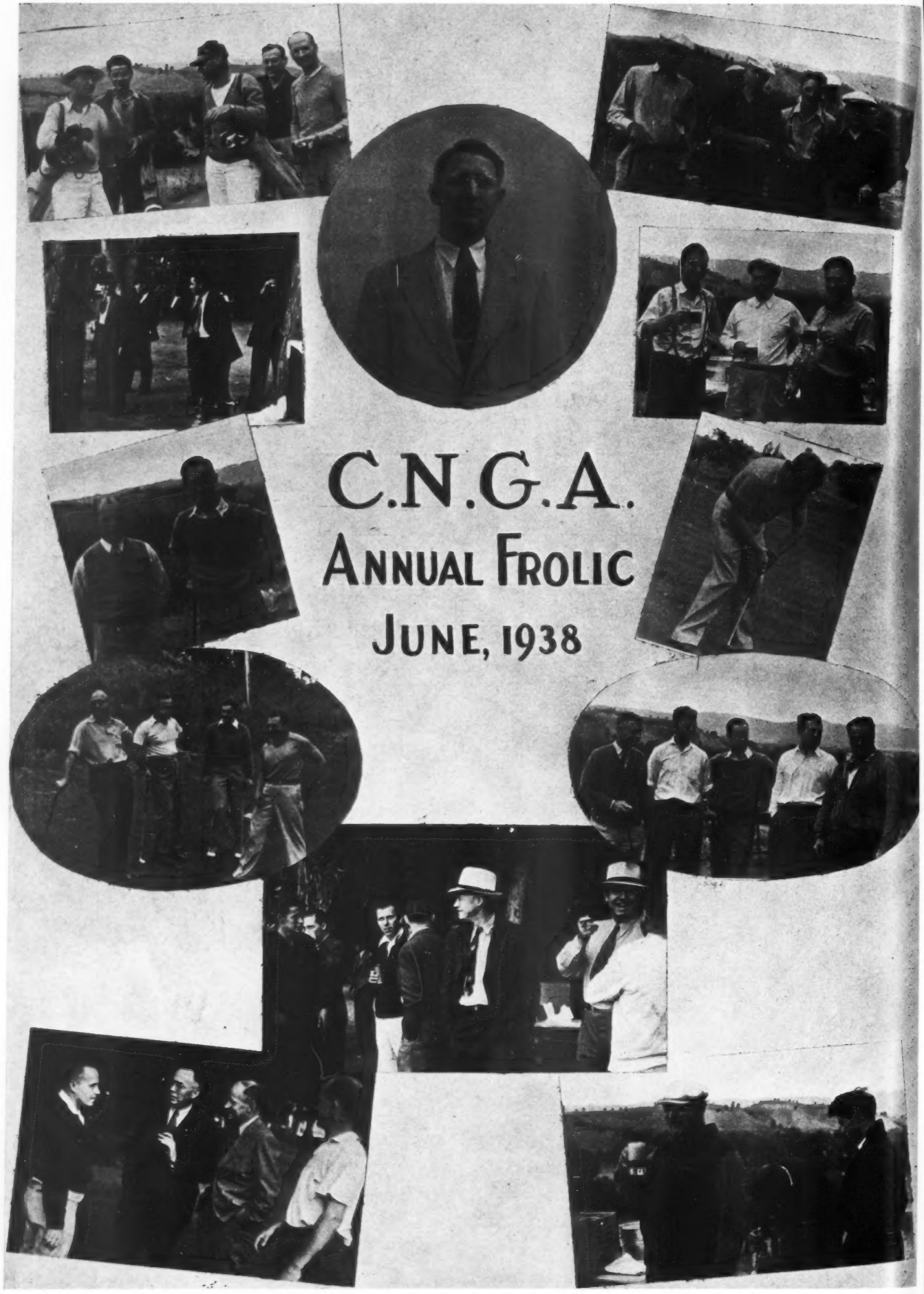
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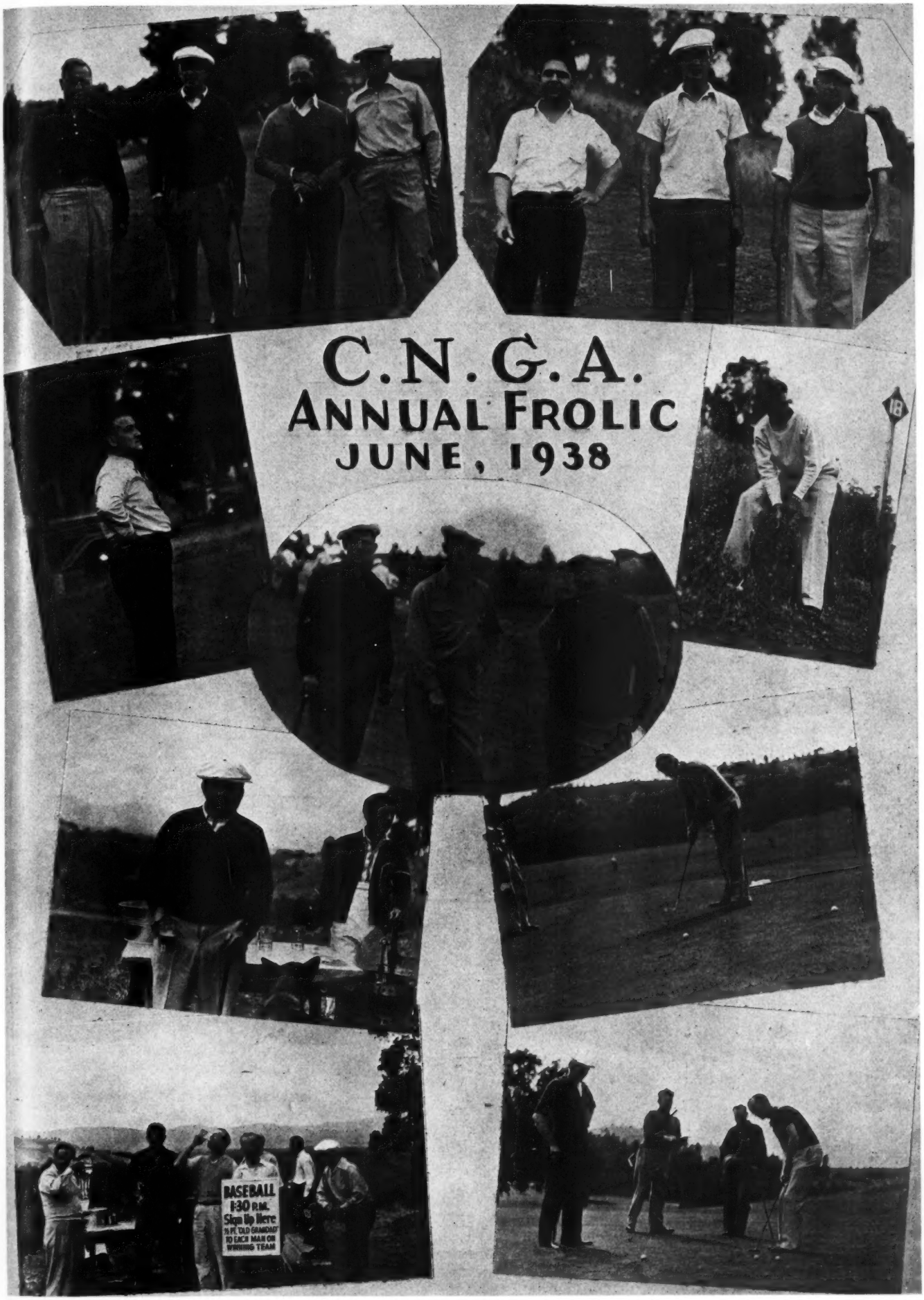
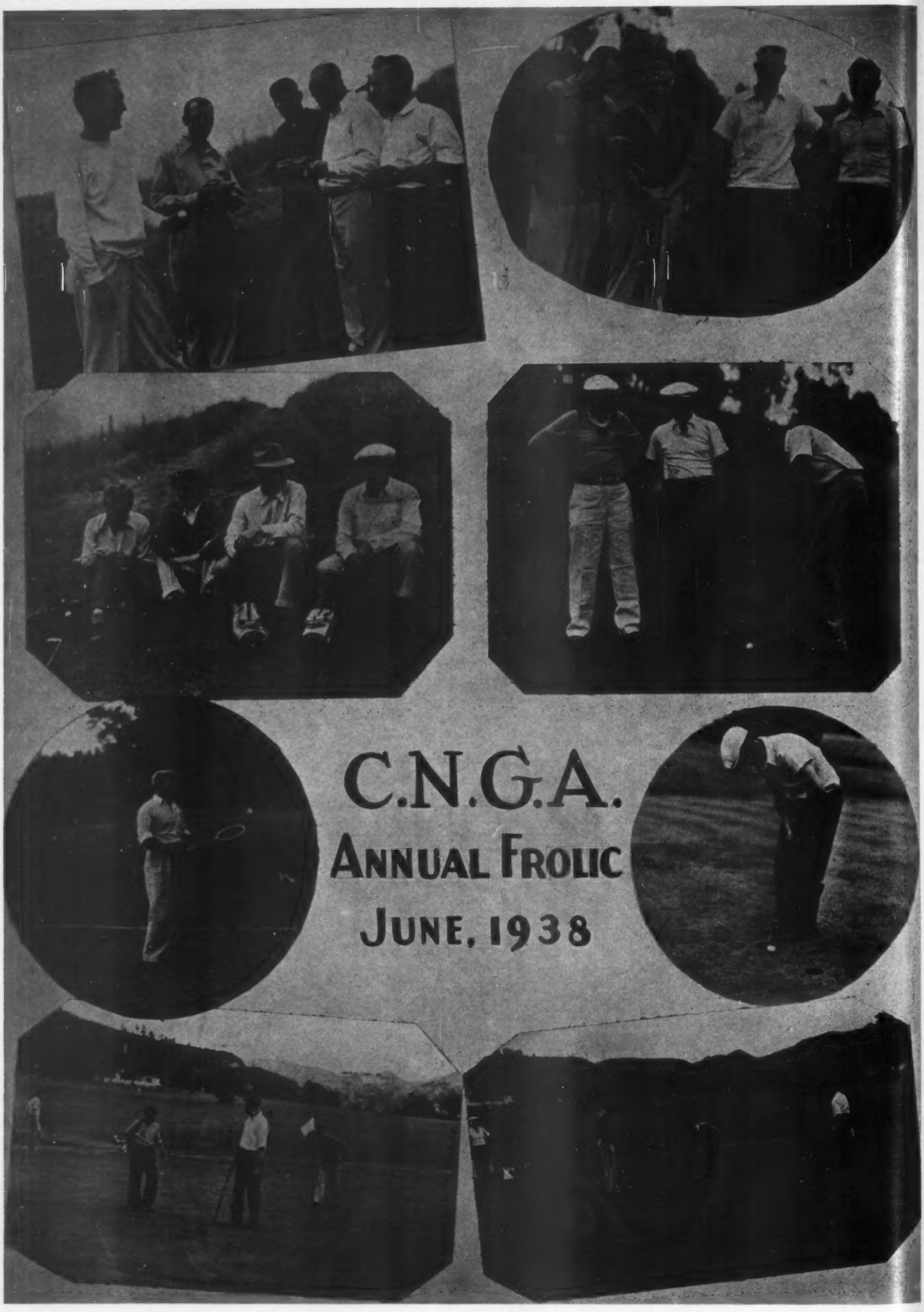
JUNE, 1938


C.N.G.A.
ANNUAL FROLIC
JUNE, 1938
18
BASEBALL
1:30 P.M.
Sign Up Here
A PT. TAD SUNDAE
TO EACH MAN ON
WINNING TEAM


C.N.G.A.
ANNUAL FROLIC
JUNE, 1938

(Continued from page 16)

BASEBALL

Won by the Independents
Winning Team consisted of:
Lowell
Webb
Rankin
Gillelen
Stevens
McGee
Crane
Brown
Staat
McIlvaine

HORSESHOES

Doubles Winners: Art Staat, Harold Harvey
Singles Winner: Otto Reinen, Jr.

BADMINTON

Doubles Winners: R. A. Nevens, T. G. Cordrey
Doubles Runners up: Ralph Haun, W. C. Dayhuff

TENNIS

Doubles Winners: Bob Allen, Frank Rodecker
Doubles Runners up: Henry Miller, Bud Hargrave

Heart Attack Fatal To Charles D. Cather

Charles Douglas Cather, 59, of the Villa Riviera, Long Beach, died suddenly of a heart attack in San Diego, June 14, 1938. He was born in Virginia and was raised at Red Cloud, Neb.

For the past 12 years he has been interested as an oil operator in Huntington Beach field. First identified with Mayor M. M. McCallen in local oil operations and the McCallen Refining Co., he has of late years been associated also in numerous oil investment enterprizes with C. M. Rood and H. McVicar.

He was associated with his brothers, James D. Cather, Long Beach and John Cather, Whittier, in various oil investments and with G. S. Wilhoite, Long Beach in the Ocean Front Oil Co. with holdings in Huntington Beach and Signal Hill.

Hoyt James, of the sales department of American Pipe & Steel, is on a tour of Mid-Continent oil fields where he will survey the design and use of emulsion treaters and water knockouts. Mr. Jones will return to Los Angeles early in July.

C. W. Timmons, president of American Pipe & Steel Co., returned to Los Angeles recently from San Francisco where he attended the meeting of the National Association of Manufacturers.

Authorizing an appropriation of approximately $357,000,000 for Federal aid to state highways during 1940 and 1941, President Roosevelt on June 9 signed the Federal Aid Highway Act of 1938.

San Joaquin Oil Men
Entertain 750 State Operators

The fourth annual Barbecue and Golf Tournament of the San Joaquin Oil Men, held at the Stockdale Country Club, June 4, definitely proved its right to a leading position on the entertainment calendar of California oil men. These annual sessions provide the means for operators over the entire state to meet friends whom they have little or no opportunity to see in the course of regular activities.

While not all of the 246 oil men who engaged in the ancient Scottish (or do the Dutch still claim it?) pastime threatened par, a gallery of 504 oilers saw eleven niblic artists forge into the prize winning circle to be rewarded with an interesting assortment of handy paraphernalia ranging from hand bags to sleeping bags.

One foursome, made up of advanced practitioners, was outstanding with each member winning a draw prize. This foursome was made up of J. Blanchard, Carl Milligan, Red Radke, and D. D. Long. The bowling score winner was Don Way, who earned title to a hand bag. Winners of draw prizes were the following:

"Bad Boy" Babcock, of Rapid Construction Co., who took the first prize, a Gladstone bag.

Bill Clark, of The Texas Co., winner of a fishing creel.

Eli Peterson, of the Shell Co., who garnered two prizes.

E. E. "Slim" Hampton, of the Petrol Corp., winner of a sleeping bag.

Dale Spencer, of the Valley Fishing Tool Co., winner of a golf bag.

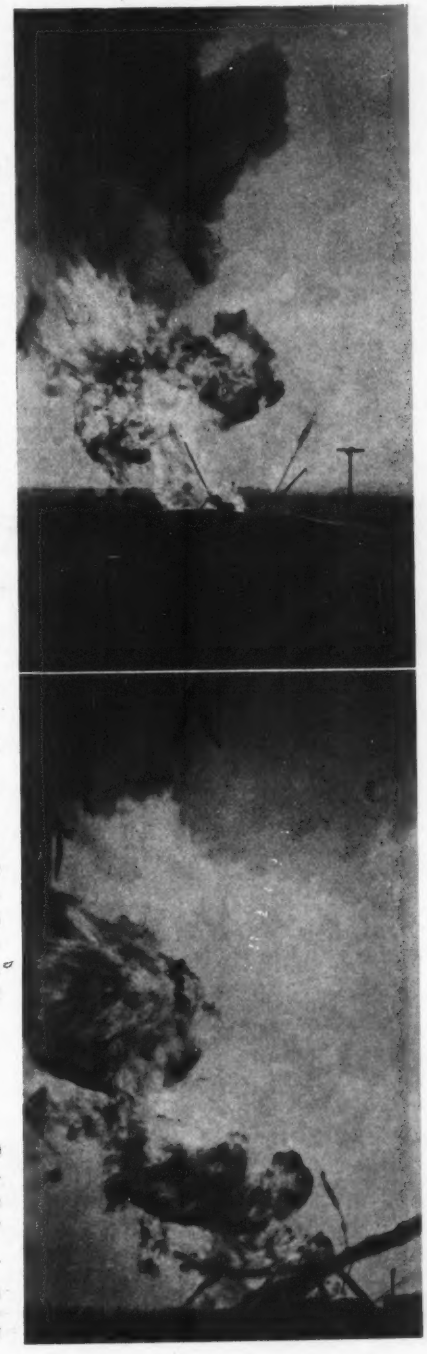
"Pat" L. G. Robinson, of Security Engineering Co., winner of a hand bag.

The second main attraction on the San Joaquin Oil Men's program, which 1400 pounds of barbecued beef made non-competitive, drew 750 participants, 246 golfers and the 504 gallery. The Salvation Army received 120 pounds of the delectable viande to distribute among transients.

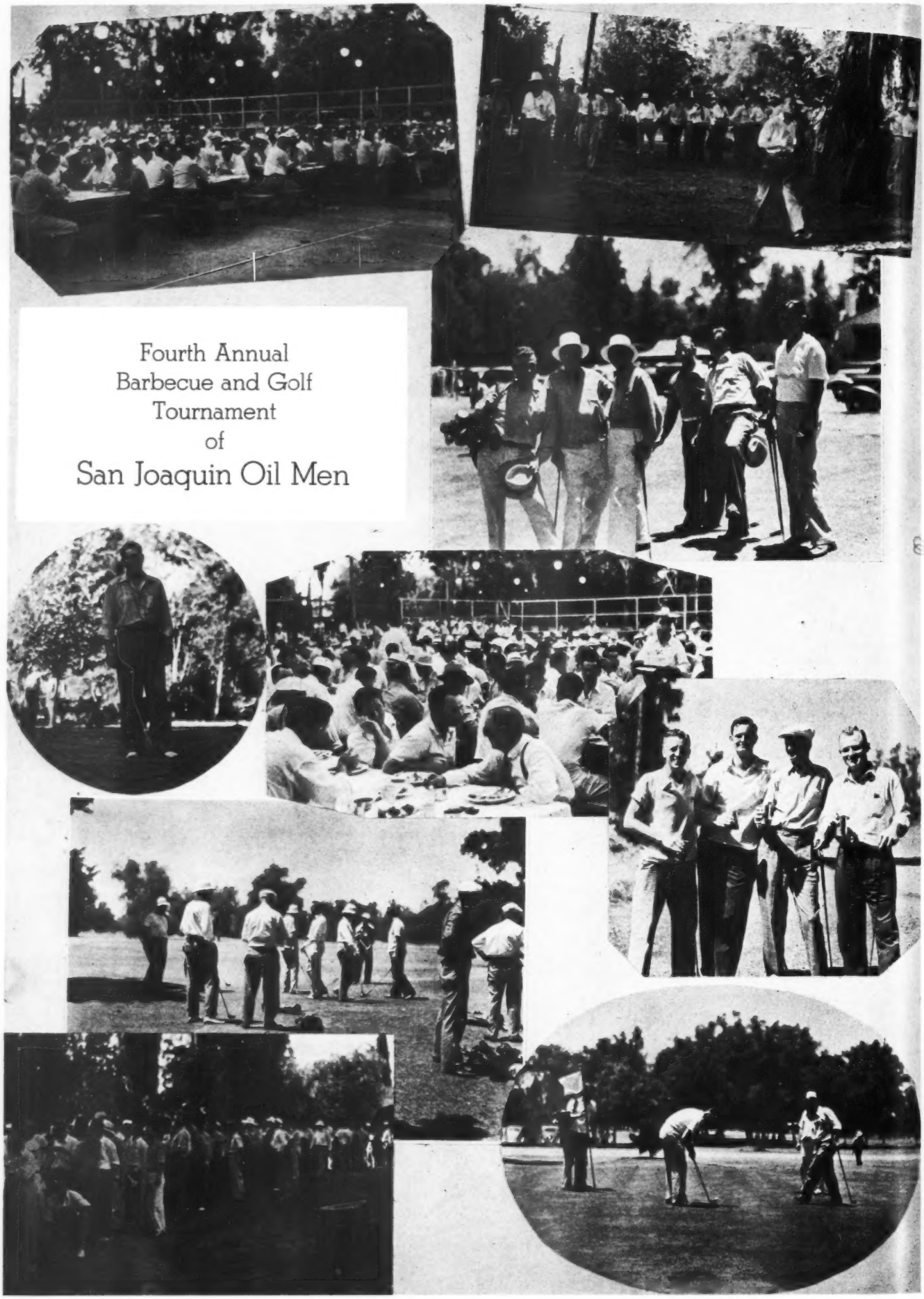
Last Minute Field Flashes
Last Minute Field Flashes

On formation test of the interval 6690 ft. to bottom at 6849 ft., Petroleum Securities Co., Gatchell No. 1, flowed at the rate of 3000 bbls. a day, clean 35 gravity oil. The well now being deepened after definitely proving the presence of Eocene production at the south tip of the Coalinga field.

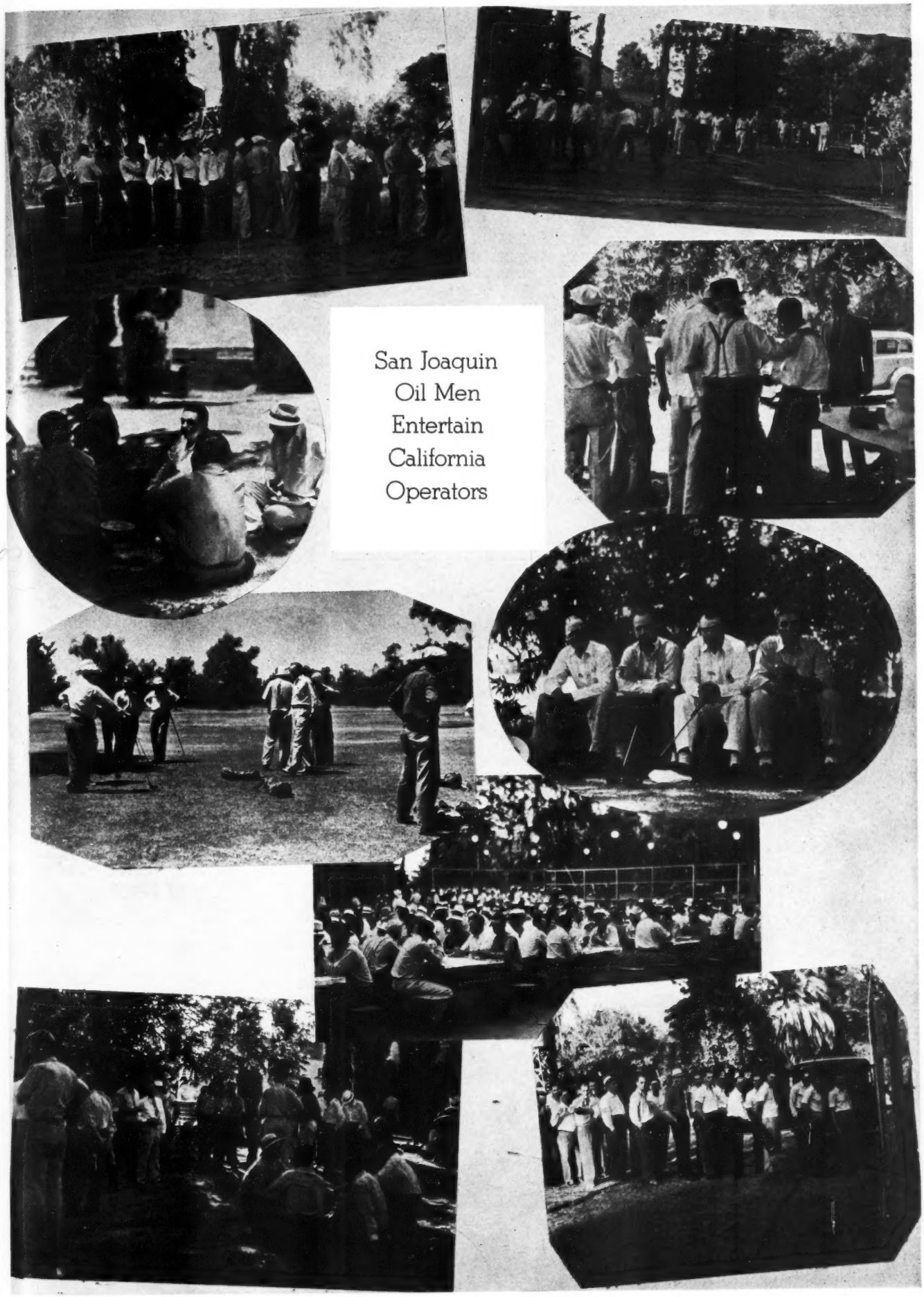
General Petroleum Corp. completed its first Rio Bravo well, Wagner No. 2, flowing at the rate of 2600 bbls. from a total depth of 11,500 ft.



Terrific in power, the blowing out of an oil well makes havoc of a costly investment and endangers the lives of drilling crews. See page 30.



Fourth Annual
Barbecue and Golf
Tournament
of
San Joaquin Oil Men



San Joaquin
Oil Men
Entertain
California
Operators

LAUGH THIS OFF

When an equipment salesman takes two cigars out of his pocket, offers you one, and tells you they are two for a quarter, in nine cases out of ten he is keeping the twenty-cent one for himself.

And **Fero Williams** is so superstitious that he won't let anybody light three cigarette lighters with one match.

Now **Bill Whaley** claims that at an oil banquet a short time ago he distinctly heard the chairman asking the fellow on his right, "Do you think I should call on the main speaker right away, or shall I let the boys go ahead and enjoy themselves for a little while longer?"

The stenographer typed, "For some time we engaged in an epistolatory bombardment," but what the superintendent really said, if we are to believe **Jim Reed,** was, "We writ back and forth for a while."

Which recalls a footnote in a highly respected periodical we perused a few days agone. Says the editor accidentally, but truthfully withal, "Another chapter of this **griping** serial next week."

We have perhaps already told you **Doc Emmon's** story about the lad who thought he had found a lady's bathing suit, but it was only a cigar band.

On the subject of sport, **Bill Johnston** explains that an armature is a guy who can't play well enough to get money for it.

"Can I go through this gate?" asked the stout oil field surveyor, who shall be nameless, and the heartless farmer replied, "I guess so, a load of hay just went through."

However, as **Tex Kilbourne** always said, there is one fine thing about every fat man. He is at least trying to correct the error of his weigh.

After traveling in an upper berth to Portland, **Hugh Matier** declares it's the first time he ever had to get up to lie down.

And that recalls **Bill Ackerman's** experience. He approached the ticket agent at San Francisco and said, "want to take a sleeper to Los Angeles." "Okay," says the agent, "but personally I think there are plenty of them there now."

It was Bill, you will remember, who wisecracked the taxi driver, "I hope you don't charge by weight," and received the comforting rejoinder, "Heck, no, I like a fare that steadies my cab down."

"Don't drink that stuff," remonstrated the considerate rousty. "It ruins the coat of your stomach," and his buddy answered, "Aw shucks, doan make no diferensh. Sh nold coat, anyway."

There is perhaps some justification for **Herb Eggleston's** belief that "Snow-white and the Seven Dwarfs" was a travel picture. It certainly traveled a long time before it landed in Glendale.

And can you imagine a fellow coming home from the horse races and calling up the doctor to find out what was wrong with his system.

"Don't rise," said the young lady on the street car to **Jack Gordon,** "I'll be getting off in a minute," and sure enough, she got off at Sixty-second Street.

By the way, apropos of nothing that matters, it might be interesting that lawyers are the only persons admitted to the bar, but a doctor can treat you any time.

Now comes a new one from **Fred Owens:** It seems that a certain sales manager invited a few friends to dinner one evening last week, and had opened the proceedings with a story that sent them all into gales of laughter. When the guffaws had subsided, his small son piped up, "Now's your chance, dad, tell the other one."

Which agains proves it's little things that try us.

HERE'S WHAT I CAN DO FOR YOU
Use me to—BRING IN WELLS EASILY—GET GOOD CEMENT JOB — SET LARGER CASING OR LINER — STRAIGHTEN CROOKED HOLE—GET BOTTOM WATER SHUT-OFF—ENLARGE HOLE FOR GRAVEL PACKING—DETAILS ARE IN THE BAKER SECTION OF YOUR COMPOSITE CATALOG.
BAKER ROTARY WALL SCRAPER

State Drilling Report

Field	Company	Well	No.	Sec.	Twp.	Range
		NEW WELLS				
Richfield	Alford Oil Co.	Robertson	1	29	3S	9W
Wilmington	Burns Oil Co.		1	32	4S	13W
	General Petroleum Corp.	P. E. Comm.	2	2	5S	13W
	General Petroleum Corp.	Blinn	4	35	4S	13W
	Macson Oil Co.		O-55-1	32	4S	13W
Torrance	Wilton Oil Co.		4	22	4S	14W
	Kovell Oil Co.		1	22	4S	14W
	Zenith Oil Co.		2	5	4S	14W
Domingues	Shell Oil Co.	Reyes	95	33	3S	13W
	Union Oil Co.	Callender	61	32	3S	13W
Los Angeles County	Security Land & Water Co.		1	8	2S	11W
Rincon	C. C. M. O. Co.	Oak Frove	7	23	3N	24W
Ventura County	Darby Oil Co. of Nevada	Darby	1	7	2N	19W
Coyote Hills	R. W. Brown & Co.		2	22	3S	9W
Montebello	Union Oil Co.	Howard & Smith	2	2	2S	12W
Santa Maria Valley	E. H. Moore, Inc.	Union Sugar	10	24	10N	35W
Semitropic Gas	Standard Oil Co.	KC 8-B	1	17	27S	24E
	Continental Oil Co.	K.C.L.	A-3-8	8	27S	24E
	Standard Oil Co.	Mushrush	1	7	27S	24E
Midway	Midway Peerless Oil Co.		16	15	31S	22E
Rio Bravo	General Petroleum Corp.	Wagoner	4	35	28S	25E
Fruitvale	Mesa Petroleum Co.	Mesa-Dixon	1	23	29S	27E
Round Mountain	Honolulu Oil Corp.		46	20	28S	29E
Mt. Poso	Vanguard Oil Co.	Baker	11	33	27S	28E
Kern River	Helm & Smith	Helm & Smith	4-A	34	28S	28E
	The Hast Oil Co.	Kern	3	34	28S	28E
Kern County	Ray Stevens	R.W. Stevens-Tejon Ranch	1	22	30S	30E
Round Mountain	Dwight G. Vedder	Bell	6	12	28S	28E
Ten Section	Shell Oil Co.	KCL-A	56-30	30	30S	26E
Coalinga	Anderson, Bramblett & Connors	Kipling	3	26	20S	14E
Colusa County	Amerada Petroleum Corp.	Calif. Lands-Colusa	1	34	16N	1W
Long Beach	A. S. Johnston Drlg. Corp.		34	13	4S	13W
Montebello	The St. Helens Pet. Co., Ltd.	Monterey	28	2	2S	12W
	F. E. Fairfield	M. L. & W.	1	2	2S	12W
	Union Oil Co.	Paul J. Howard	2	2	2S	12W
Rosecrans	Union Oil Co.	Rosecrans	23	18	3S	13W
	Univ. Consolidated Oil Co.	Universal-Trust	4	18	3S	13W
	Barnsdall Oil Co.	Trust	4	18	3S	13W
	Union Oil Co.	Rosecrans	21	19	3S	13W
		DEEPEN OR REDRILL				
Torrance	Imperial Gypsum & Oil Corp.	Torrance	18	14	4S	14W
	Summit Oil Co.	Wilson Comm.	1	23	4S	14W
	MacDonald & Burns	Moore	2	23	4S	14W
	MacDonald & Burns	Moore	7	23	4S	14W
	Hanseo Oil	Gladys	1	14	4S	14W
Rosecrans	Republic Petroleum Co.	Republic Trust	1	18	3S	13W
Montebello	The St. Helens Pet. Co., Ltd.	Piuma-Briano	7	6	2S	11W
Long Beach	Shell Oil Co.	Cherry Hill Comm.	2	29	4S	12W
	W. O. Dye	Dye	7	24	4S	13W
	Wm. H. Cree	Harriman-Jones	2	29	4S	12W
	Petroleum Securities Co.	Wilson	2	29	4S	12W
	Shell Oil Co.	Binkley	2	29	4S	12W
	Barr Oil Co.		5	13	4S	13W
	Morton & Elder	Del Mar	1	30	4S	12W
Santa Fe Springs	George F. Getty, Inc.	S. F. S.	32	5	3S	11W
Huntington Beach	Standard Oil Co.	Huntington B	16	2	6S	11W
	Huntington Signal Oil Co.	Kirk	7	2	6S	11W
	McVicar-Rood	Smith	1	10	6S	11W
Richfield	Marvin Spaulding	McFadden	3	28	3S	9W
Midway	Midway Peerless Oil Co.		10	15	31S	22E
Sunset	Standard Oil Co.	M. J. M. & M.	63	36	12N	24W
Edison	Seibold Oil Co.		6	12	30S	28E
Fruitvale	Western Gulf Oil Co.	Sawyer & Reed	4	27	29S	27E
Kern County	C. C. White	White-Harp	1	9	26S	26E
		ABANDON				
El Segundo	Union Oil Co.	El Segundo	2	18	3S	14W
Simi	Mrs. Germanina Trucano		1	5	2N	17W
Piru	Continental Oil Co.	Elkins	1	23	4N	19W
Santa Maria Valley	Ray W. Wilson	Beaufoy	1	26	10N	34W
Midway	Honolulu Oil Corp.		21	8	32S	24E
	National Oil Co.		13	35	32S	23E
Semitropic Gas	Seaboard Oil Co.	Continental	27-24	24	27S	23E
	Seaboard Oil Co.	Continental	22-15	15	27S	23E
Mt. Poso	W. P. W. Petroleum Co.	W. P. W.	4	14	27S	28E
Santa Maria	Bankline Oil Co.	Silva	1	7	9N	33W
Elk Hills	Standard Oil Co.	Tupman	24	36	30S	24E
Round Mountain	Eastmont Oil Co.	Olcese	7	16	28S	29E
Coalinga	James M. Conlon Co.		1	25	19S	14E

Summary	Week Ending June 18	Previous Week	To Date This Year	To Date Last Year
Total New Wells	22	17	561	737
Total Deepened or Redrilled	21	6	387	337
Total Abandoned	4	9	221	237

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2
McNEELY
Vibrating
MUD SCREENS USED ALL THE WAY DOWN ON WORLD'S DEEPEST WELL
CONTINENTAL OIL COMPANY'S KCL A-2
ALL THE WAY
ALL THE WAY DOWN
Large Capacity, Uniform Vibration, a Curved Screen Surface, Divided Screen Cloth and Completely Unitized design are a few of the many advantages of the McNEELY Vibrating Mud Screen which provide a dependable supply of clean, plastic drilling fluid at lowest cost.
On the world's deepest well, as on many other drilling operations, it was McNEELY Mud Screens all the way down!
Bulletin No. 101 gives complete information.
VERNON TOOL CO., LTD.
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LOS ANGELES
CALIFORNIA

Use Of Blowout Preventer Saves

Operators Heavy Expenses

The efficacy of modern blowout preventers and the wisdom of their use have recently been demonstrated strikingly both as applied to proven field operations and to exploratory wells.

In the Long Beach Harbor, wells capable of flowing in excess of 10,000 bbls. a day are completed within a few feet of the water's edge. The smallest quantity of crude allowed to reach the ship channels here would do damage running into the thousands of dollars and involve the guilty operator in endless legal difficulties with city, state and federal authorities. Through the use of the latest type of blowout prevention equipment, several near disasters have been nipped in the bud, one in particular which threatened momentarily to "paint" the entire industrial district as well as coat the channel waters with a dangerously inflammable film of high gravity oil.

No less dramatic was the experience of a major operator whose wildcat well blew in through the drill pipe while pulling a wire line core. The crew was able to replace the kelly and pump in mud but the well started to blow around the pipe and the loss of the hole, derrick and equipment was averted only by the proper functioning of the blowout preventer, prior to the arrival of materials for weighting the mud fluid.

Not only do new type control heads provide the cheapest form of insurance to hole and equipment but the hazard to personnel is minimized as they may be operated hydraulically from some distance away from the derrick.

The blowout preventer shown in Figure 1 is operated by means of water pressure from the boiler feed pumps. So pressure will always be available the pipe line leading to the rig is cut into the boiler feed manifold, above and clear of all valves.

As shown in Figure 2, the pipe line leading from the boiler feed manifold passes through a hand core pump positioned on the derrick floor, handy to the driller, with a control valve on the outlet side of the core pump. With this arrangement, pressure is at all times on the core pump and will indicate leaks in the same.

Following the control valve, is a tee fitting, the right angle connection of which leads through the pressure gauge to the type K Blowout Preventer located below the rig floor. The running connection from the tee leads to a bleed-off valve.

To close the blowout preventer, using the described hookup, the bleed-off valve is closed and the control valve opened, which allows the boiler feed pump pressure to contract the blowout preventer rubber about the drill pipe, or any object suspended in the well.

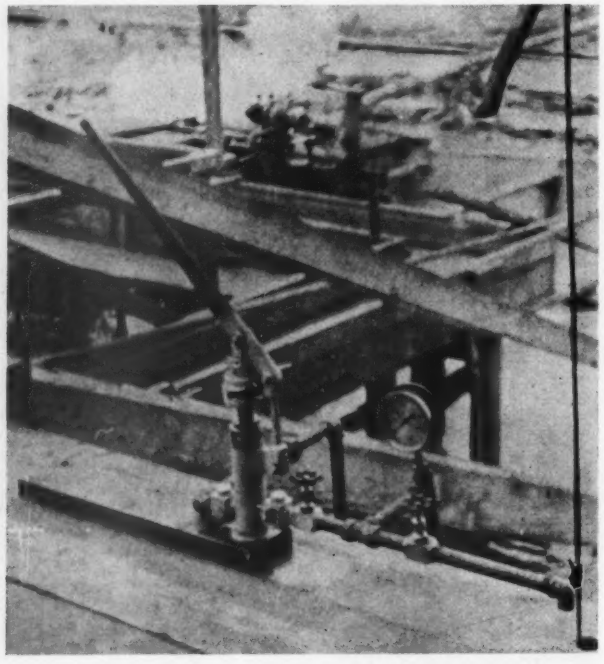
The boiler feed pump pressure is usually sufficient to stop the first blow-by and if additional pressure is required, it can be obtained with a few strokes of the core pump.

During the drilling operation, the bleed-off valve is left open to avoid accidental closing of the blowout preventer rubber through leakage of the control valve.

The control valves being positioned on the rig floor, at the highest elevation of the system, maintains the system full of water at all times, and free of air pockets.

The above described operating hookup is recommended for the usual steam operated rig. Specifications covering other means of operation, using an individual pump, high pressure gas, CO_2 bottled gas, air and mud-laden fluid are furnished upon request to manufacturers.

Figure 1. The blowout preventer is operated by means of water pressure from the boiler feed pumps. At right, Figure 2, is shown an arrangement providing for the application of pressure at all times on the core pump so that leaks will be readily detected at all times. Connected to the core pump at the right are the control and bleed off valves. The line passing to the rear of the pump connects with the boiler feed manifold.



Union Oil Company Director Passes Away

R. E. Haylett, director of manufacturing of Union Oil Co., a member of the board of directors, and one of the foremost petroleum refining and research men on the Pacific Coast, died June 13. Taken ill while on a trip East Mr. Haylett was ordered to the hospital on his return to Los Angeles a week ago Sunday.

Mr. Haylett resided at 133 Roswell Avenue, Long Beach. He was born in Milwaukee, Wisconsin, Aug. 2, 1891. A graduate of Beloit College and Massachusetts Institute of Technology, he entered the employ of Union Oil Co. as a chemist at the Oleum, Calif., refinery in 1916. From the start he played an important part in the technical progress of the company. In 1920 he was appointed chief chemist, and two years later was made manager of research and development. The company's research laboratory at Wilmington, regarded as one of the finest in the country, was built under his supervision. In 1926 he was selected as technical assistant to the vice president in charge of manufacturing, and in March, 1931, was appointed director of manufacturing. Three months ago he was elected to the company's board of directors.

His work in the realm of petroleum refining and research won him national recognition, and culminated in 1937 in his election as chairman of the Central Committee on Refinery Technology, American Petroleum Institute.

Mr. Haylett leaves a widow, Mrs. Alice M. Haylett, and two daughters, Mrs. Oliver Bardin of Salinas, Calif., and Clarice Helm Haylett, 16 years old.

Many New Features in Gas Engine

W. G. Durant, engineering consultant, for the Lycoming Mfg. Co., Williamsport, Pa., is here showing Paul M. Medearis, president of the Medearis Oilwell Supply Co., Lycoming's newly appointed oil field distributors, a cutaway section of their oil well pumping engine. Mr. Durant is on the left.
Due to the many different features incorporated in the design of this strictly natural gas engine such as the automatic safety protection, crankcase ventilation system, water packeted exhaust manifold, speed governor without linkage, floating oil pump screen, baffled piston head, zero clearance hydraulic valve tappets, thermostat with water bypass, packless water pump, etc. Lycoming have found it necessary to ship this cutaway engine to the coast in order to simplify the explanation of what makes it claimed capable of providing 'the lowest cost per barrel pumped'.
Since all of the features were designed 'into' the engine rather than 'onto' it this cutaway engine has proven valuable to all interested, the makers say.

At the annual summer meeting of the Society of Automotive Engineers, at White Sulphur Springs, West. Va., June 12 to 17, three research engineers of the Union Oil Company of California will present a paper on "Improvements in Diesel Engine Lubricating Oils." The three authors of the study are shown above examining Diesel engine parts used in the research tests. They are, left to right: Dr. Ulric B. Bray, assistant manager of research; Dr. David R. Merrill, manager of research; C. C. Moore, Jr., research supervisor.

Executives Prepare For Golden Gate Show

Western petroleum executives witness the signing of a contract, involving 40,000 square feet of exhibit space in the Vacationland building on Treasure Island, between the 1939 Golden Gate International Exposition and the newly formed Golden Gate Petroleum Exhibitors, Inc. Left to right, seated, are H. D. H. Connick, Chief Director of the Western World's Fair; B. I. Graves, (Tide Water Associated), Exhibitors' President; F. A. C. Guepin (Shell), and A. C. Galbraith (Union). Standing, left to right, are P. H. Patchin (Standard), H. E. Britzman (Richfield), T. H. Webb (Texas), W. B. Curtis (General), W. A. Newhoff (Union), W. W. Monahan (Exposition), A. B. Tanner, attorney; Walter J. Held (Standard), E. A. Hugill, Jr. (Shell), and Austin Black, Manager of Petroleum Exhibitors, Inc.

A bill to increase the import excise tax on crude and fuel oil from 0.5 of a cent to 1.5 cents a gallon and to embargo imports when (1) stocks rose to a point where it appeared purchasers could not handle all of production and (2) when price of fuel oil dropped below a certain "parity" with coal was introduced in the House on June 7 by Representative Houston of Kansas. The bill would also place a $2 a ton import tax on asphalt.

Though danger of action on the Nye resolution, awarding title to California's submerged oil lands to the Federal Government, had been averted, Rep. Sam Hobbs of Alabama said on June 3 that he would still press action this session.

A favorable report on the O'Mahoney resolution calling for an investigation into monopoly and anti-trust laws has been ordered by the Senate Judiciary Committee.

Petroleum Industry Unites For Western World's Fair

Uniting for a single impressive exhibit that will tell the story of oil from the "human interest" point of view, the petroleum industry has signed a major space contract that insures the expenditure of at least $300,000 on a spectacular display at the Golden Gate International Exposition in 1939.

The cooperative effort of the industry will be exerted through Golden Gate Exposition Petroleum Exhibitors, Inc., a non-profit corporation organized for the purpose, and headed by B. I. Graves. Among the companies already participating are General Petroleum Corp., Gilmore Oil Co., Richfield Oil Corp., Rio Grande Oil Co., Seaside Oil Co., Shell Oil Co., Standard Oil Co. of California, Sunset Oil Co., The Texas Co., Tide Water Associated Oil Co., and Union Oil Co. Others are being invited to join.

A contract has been signed for approximately 40,000 square feet of exhibit space in the unique Vacationland building on Treasure Island, Western World's Fair site in San Fernando Bay. Artists and designers are developing plans for a comprehensive display of unusual beauty, and experts in scientific and technical fields have been working for more than a year to create new display uses for petroleum.

The joint display on Treasure Island will supplement an expenditure of about $500,000, by the individual oil companies through established advertising media, calling attention to the Western World's Fair as a travel incentive. Directors of the collective exhibit, in addition to Mr. Graves of Tide Water Associated Oil Co., are W. B. Curtis, General Petroleum; H. E. Britzman, Richfield; F. A. C. Guepin, Shell; W. J. Held, Standard; T. H. Webb, Texas, and A. C. Galbraith, Union.

Ideco Employes and Their Families Hold Annual Picnic

The second annual International Derrick & Equipment Co. picnic of employes and their families at Banning Park, Wilmington, proved to be one of the big affairs of the year early this month, as the above photograph shows. The feature of the entertainment program was a base ball game with benedicts and bachelors opposing each other. The bachelors won 8-5. This was a sharp reversal of the game results in the first annual picnic which the married men won by a score of 20-1.
L. R. Prep Wells won the 100 yard dash in his class with a record breaking 2 hours and 8 minutes.

Lane-Wells Co. Supers In Five-State Meet

This photograph was taken at a meeting of the District Superintendents and Sales Engineers of the Lane-Wells Gulf Coast Division held recently at their plant in Houston, Tex.
Seated in the front row, left to right, are: J. L. Dore; D. B. McCutchen; M. E. Montrose, Gulf Coast Division Manager; P. V. Tilbury.
In the first row standing, left to right, are: T. A. Pope, R. A. Whittlesey, W. E. Lynd, W. A. Johnson, E. B. Hearn, G. E. Thompson, J. F. Davis, K. K. Gage, T. E. Thompson.
In the second row standing, left to right, are: N. L. Baker, C. E. Shilcutt, F. O. Bohn, J. C. Traylor, H. C. Ham.
In the third row standing is A. T. Hodges.
The Gulf Coast Division includes Texas, Louisiana, Arkansas, Mississippi and New Mexico.

Resistoflex Tubing for Oils and Solvents

Resistoflex Corp., 370 Lexington Ave., New York, announce the completion of facilities at their Dover, N. J. plant, for the manufacture of "Resistoflex" PVA Tubing in diameters up to and including ½-inch I. D. Facilities will be provided in the future for the production of larger sizes.

"Resistoflex" is the trade mark and trade name employed in the American production of a flexible synthetic resin—basically, polyvinyl alcohol—which is inert to gasoline, oils and organic solvents; which retains its flexibility throughout a wide temperature range, and which has been manufactured, tested and sold on a commercial scale during the past several years by foreign corporations with which Resistoflex Corp. is indirectly affiliated.

This patented tubing is being used successfully abroad in many industrial applications: chiefly in the fuel and brake lines and lubricating systems of automotive equipment, Diesel engines and aircraft; in the conveying of solvents and mineral and vegetable oils in the chemical and process industries; in hydraulic lines; and in fuel and oil handling equipment.

The material, it is claimed, is the only commercially-known substance that is completely insoluble in gasoline, oil . . . the aliphatic compounds and aromatic series of hydrocarbons—ethers, esters, alcohols, ketones, etc.

Physical characteristics of "Resistoflex" include extreme lightness—the specific gravity is approximately 1.26, one-half that of aluminum; great toughness; a remarkable pressure-resistance; good velasticity; and a flexibility so marked that "Resistoflex" tubing literally may be tied in knots. It is highly efficient in absorbing vibration. Under normal conditions of use over a long period, it shows no trace of wear, fatigue or deterioration, the makers say.

At present, "Resistoflex" is offered in the form of tubing in standard sizes, although "Resistoflex" gaskets, washers, packing, diaphragms and sheet material are scheduled for later production. Specifically-designed couplings have been developed for use with "Resistoflex" tubing, each tube length with its couplings ordinarily being supplied as a unit.

A complete engineering report upon exhaustive chemical and physical tests of "Resistoflex" is now being prepared.

New Oakite Cleaning Booklet

An interesting, fact-filled, 36-page booklet, illustrating and describing the latest, up-to-date methods for handling the many necessary cleaning operations in conjunction with present day automotive fleet maintenance and truck motor repair work has been recently released by Oakite Products, Inc., New York, N. Y., manufacturers of maintenance cleaning compounds.

Among the operations fully outlined are cooling systems, washing motor interiors and exteriors, steam or tank cleaning engine repair parts, washing bodies and chassis and general maintenance cleaning.

Of especial interest to producers, refiners and marketers, who do not have readily available facilities for removing paint with hot solutions or by steam cleaning, is the complete data on the effective method developed for doing the work with cold solutions.

Fleet supervisors, maintenance superintendents and other oil industry executives may secure a copy of this booklet free. Write to Oakite Products, Inc., 5504 Hollywood Blvd., Los Angeles, California.

A statutory minimum wage level starting at 25 cents per hour with the ultimate goal of a 40 cents per hour and a statutory maximum work week of 44 hours leading to a 40 hour week in three years constitute the achievements of the House and Senate conferences endeavoring to work out a compromise wage-hour bill.

Hydrostatic Scavenger Developed by Shull Co.

Following exhaustive tests in wells 8,000 feet and deeper, where perfect records have been set for complete recovery of junk, the new Shull Hydrostatic Scavenger is being introduced by the Shull Perforating Co., Inc., 2750 Cherry Avenue, Long Beach, Calif.

Utilizing the differential of pressures at the surface and at the bottom of the well, the tool picks up all junk, including shapes which no other tool can successfully fish, according to the engineers of the company. The Scavenger is coupled to the lower section of the drill pipe after the drill collar is removed. After rotated to the bottom, the shoe scrapes and gathers junk to the center.

Weight of the string is sufficient to hold the Scavenger stationary. A half-turn on bottom turns the valve threads and opens the valve, permitting the junk to be forced up past hinged retainers into the junk basket.

The perforated, tapered seat around the valve provides positive action and permits draining so that the string is brought up dry.

The Shull Hydrostatic is available in all sizes for rental in California, and for sale elsewhere.

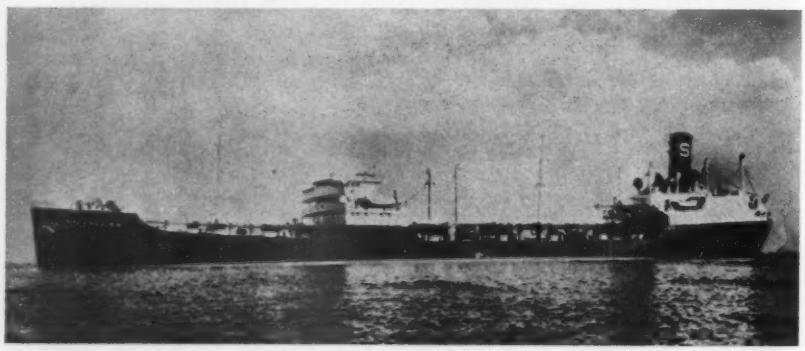
In cases appealing its rulings under the social security tax laws, the Board of Internal Revenue on June 8 ruled that the Board of Tax Appeals is without jurisdiction.

Conferees reached an agreement on June 7 to report to both Houses a compromise pollution bill from which had been stricken drastic Federal regulation and control features inserted in it by Senate amendments.

Production of minerals in the United States in 1937 showed a substantial increase over the output of 1936, which year had registered a large increase over 1935, reports the U. S. Bureau of Mines.

Refusing to grant the oil companies an injunction to restrain the government from retaining the wells, the first district court of Mexico in June upheld the government's expropriation of foreign oil properties.

New Standard Tanker



S.S. H. D. Collier, the new 103,000-bbl. capacity oil tanker operated principally in Pacific Coast service. This is one of the two modern tank ships now added to the Marine fleet of the Standard Oil Co. of California.

Left: Typical crew's room of the S.S. H. D. Collier . All men are assigned two to a room equipped with hot and cold running water, forced draft ventilation, and other features for comfort and convenience. Center: This large recreation room is for the exclusive use of members of the crew of this oil tanker. Right: Spacious attractive mess room for the crew. The food is the same as that served for the officers' table.

Field Development

Los Angeles Basin

Six Completions In Wilmington

Completion of only six new wells in the Wilmington field during the past two week period does not truly reflect the present development rate in the area as 28 wells are now actively drilling and several more are on the verge of completion. Of the six now going to the tanks, no two were completed by the same company, and none being worthy of note except Geo. F. Getty's Ford zone recompletion, W-1 at the corner of Flint and "E" streets. A full string of 6⅝-in. casing including 114 ft. of perforations was landed on bottom at 5701 ft. and cemented through holes at 5565 ft. The casing was then gun perforated from 5150 to 5245 ft. and both open intervals treated with acid. Cleaned out to bottom with 2½-in. tubing at 5116 ft., the well was swabbed in with an initial flow of 528 bbls. of 29.5 gravity oil cutting 8%. At the corner of Flint and Anaheim, Wilmington Oil & Development Co. is completing its W-1 in the same zone.

Results obtained in Victory No. 1, northeasterly outpost being currently completed by Richfield Oil Co. at 3177 ft., will have an important bearing on the future development of the area.

Republic Petroleum Co., which, due to litigation, was late in starting on the Newport lease on West 7th St., is now drilling three wells, the first nearing completion below 2900 ft.

Highest bids ever received on a piece of oil property were recently opened by the City of Long Beach in answer to an advertisement calling for submittals on a four acre tract lying beneath the harbor turning basin which must be drilled from surface sites acquired from Union Pacific Railroad. Typical of the offers received was that of the Caminol Co. which proposed a royalty of 50% until the cost of the four wells to be drilled was paid out, after which the city to receive 65% of production. Other companies offered bonuses up to $100,000 and royalties varying from 16 2/3% to 70%. At the opening of bids, Long Beach Dock and Terminal Co. served notice on the Harbor Department of its claim to lands beneath the harbor channels and at the same time threatened suit in case development work is started.

New Torrance Boom Reaches High Point

The high point in the new Torrance boom was reached in the past week with the completion of three wells, each with initial production rate at better than 400 bbls. a day. On short gauges, Patton, Conaway & Quigley Fee No. 1 on 233rd St. and Star Petroleum Co. No. 1 on 231st St. each registered at the rate of 550 bbls daily and Burken Oil Co. Aitken No. 1, on 231st St. was checked at the rate of 416 bbls. These wells, all bottomed short of 5000 ft. and with water shut off points between 4920 and 4940 ft., bear out the theory that better production will be encountered toward the south until edge conditions are found. Another southerly well, Summit Oil Co. No. 1, located on 233rd St., was previously completed yielding 565 bbls. Other recent completions include those of M. E. Albertson for 230 bbls., C. C. M. O. Co. for 125 bbls., Texas Co. for 256 bbls. and two better than average wells by MacDonald & Burns for over 300 bbls. each. Cuts generally have been reasonably low and do not indicate that the southern productive limit has yet been reached.

Good completions have materially stimulated activity in the field, bringing the total number of projects underway to nearly forty, with every indication

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Los Angeles County					
Bellflower	Clayton, Geo. L., Scott	1	32, 3-12	6897	Idle
Brea	Pressel, Perry, Tull	1	30, 2-9	4560	Idle
Castaic	Royal Land Corp.	1	8, 4-17	840	Drilling
	Shell Oil Co., Dougherty	1	9, 4-17	2220	Abandoned
La Mirada	John McKeon & Assoc. Carmenita	1	21, 3-11	3850	Drilling
Lomita	D & B Oil Co.	1	25, 4-14	5275	Flowing
Monterey Park	Monte Cristo, Garvey	1	27, 1-2	5412	Idle
Newhall	Barnsdall Oil Co., R.S.F.	3	26, 4-17	6553	Stdg. cmtd.
	National Pet. Corp.	1	27, 4-16	2475	Idle
	Palmluck Oil Co.	1	23, 3-16		Rigging up
Palmdale	Antelope Valley Pet.	1	17, 6-12	50	Idle
Palos Verdes	Gene McLaren	1	27, 4-14	3992	Idle
	Rolling Hills Pet.	1	27, 4-14	4220	Cleaning out
Pico	British Am. O. P. Co.	1	12, 2-12	4568	Idle
San Fernando	Tide Water Assoc. Porter	1	27, 3-16		Rigging up
Whittier	Langstaff, Geo. W., Iliff	1	8, 2-11	650	Drilling
San Bernardino					
Chino	So. Counties Pet. & Drlg. Co.	1	26, 2-8	300	Drilling
Orange County					
Anaheim	Shell Oil Co., Weisel	1	16, 4-10	5994	Abandoned
Costa Mesa	A. V. Oil & Gas Co.	1	16, 6-10	3025	Drilling
Kraemer	Congress Oil Co., Kraemer	1	36, 3-9	3017	Testing

that the peak has not yet been reached. Pressing more and more to the south, new rigs are now springing up along 235th St. with every indication that the march will continue at least another block.

— —

El Segundo Gough 12 Is 200-Bbl. Producer

The mild drilling revival in El Segundo received a slight set back in the completion of Ohio Oil Co.'s Gough No. 12 as only a 200 bbl. producer from a total depth of 7411 ft. Located east of the coast highway, this well is not, however, an indication of what may be expected from the three wells now drilling in the subdivided sector. In the latter group, Sovereign Oil Corp. No. 2 is now drilling in the schist pay and will be the first to be completed with Apex Pet., Elsie No. 3 and Burnoel Oil Co. Elsie No. 1 following. Tentative plans of Sovereign call for the simultaneous drilling of two wells after the completion of the present project.

Amendments which bring under jurisdiction of the Walsh-Healey Act all Government contracts over $2000 were passed by the Senate on June 7.

W. Coyote Edge Test Is 400-Bbl. Pumper

Standard Oil completed its West Coyote edge project, Bastanchury No. 2, with bottom plugged from 5983 to 5914 ft. pumping 400 bbls. of 32 gravity oil cutting 6%. The 8⅝-in. water string was set at 5875 ft.

General Pete to Test Garden Grove Area

With its Garden Grove leasing campaign nearly concluded, General Petroleum Corp. is expected to start work in the near future on its first seismographically located basin wildcat since its discovery of Wilmington in the latter part of 1926. Using the same methods employed in locating Terminal No. 1, the company is reported to have mapped a well defined subsurface high within the large black of acreage now under lease.

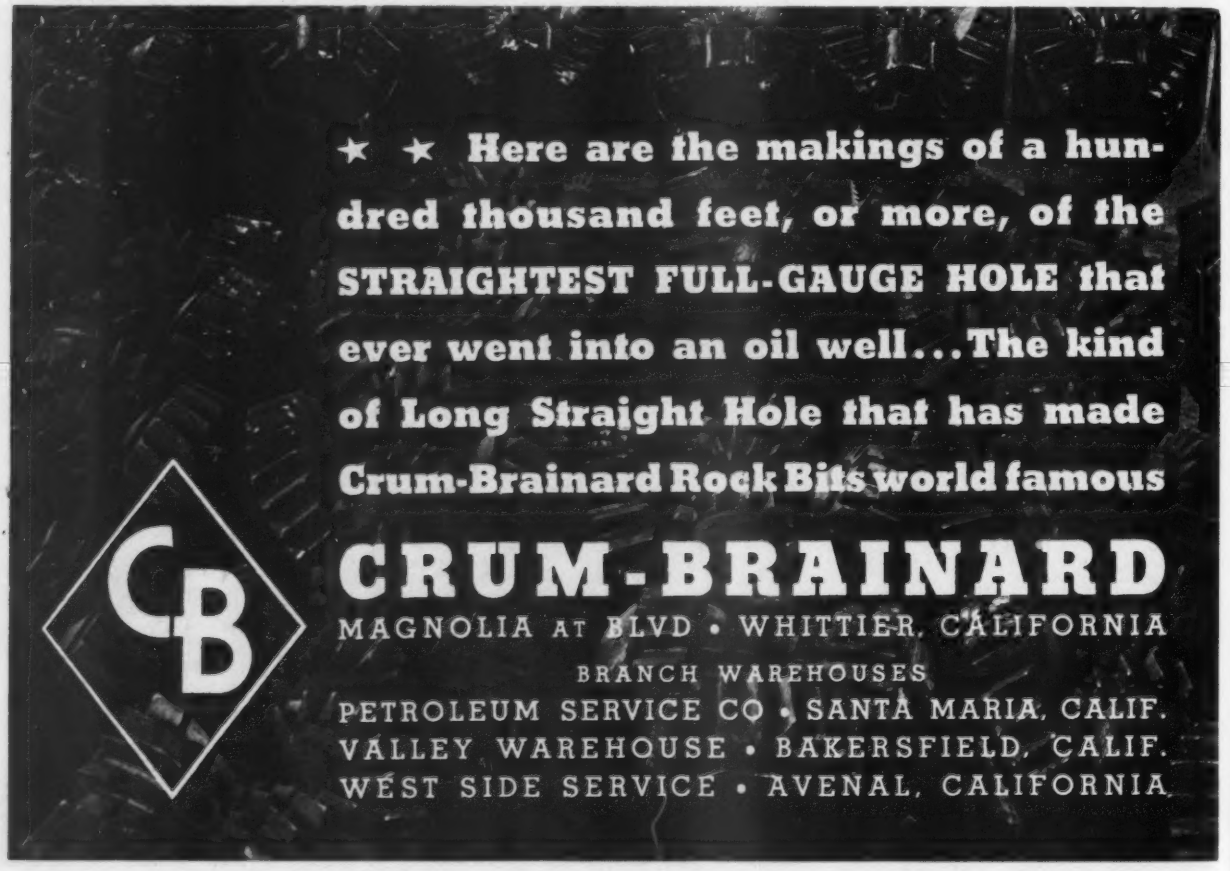
Redondo Hunter-Devlin Testing Above 4700 Ft.

Clifton Oil Co., conducting a series of tests of the old 5500-ft. Hunter-Devlin well near Redondo, obtained only a water flow and a small quantity of oil from 4700 ft. and is now testing showings encountered above that point.

Spud Signal Hill First Deep Test

Possibly the forerunner of another boom period for celebrated Signal Hill, DeSoto Oil Co. has spudded what is projected to be the field's first real deep test. Although many wells drilled in 1927, '28 and '29 exceeded 7000 ft. and one or two even 9000 ft., none of these were by any means straight and cannot in any way be taken to have been true tests of the possibilities offered. Old surveys of the deepest wells indicate them all to be bottomed far from the derrick site and invariably in poor structural positions. Since the subsidance of the final deep drilling boom in 1930, tremendous strides have been made in directional control and it is now possible to drill to almost unlimited depths maintaining at the same time a perpendicular hole. Having only spudded the first week in June, De Soto is now but 2800 ft. in depth. The well is located on Gundry Ave. north of Burnett St. in the famous Lovelady area.

Of utmost importance to the future of the northwest extension area are the recent findings of Hilldon Oil Co.'s Dominguez No. 1 on the west bank of the flood control channel and the out-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post well of the new fault play. Carried down as a test of the Miocene, the well encountered the top of a 100-ft. good oil sand body at 7375 ft. and another good body from 7600 to bottom at 7737 ft. Casing has been set for a production test. It is believed in some quarters that the newly discovered sands correlate more nearly with the eighth Callender zone of Dominguez than with sands found at comparable depths at Signal Hill.

By far the best recent completion in the extension was Hilldon's Pool No. 3 located adjacent to the Pacific Electric station and finished at 4183 ft. with an initial rate of 1040 bbls. a day of 24 gravity clean oil. Pool No. 2 located only 300 ft. south of No. 3, made only 290 bbls. on the pump from 4167 ft. Amebco No. 4 is being completed from 4385 ft.

East of the railroad tracks, A. S. Johnston Drilling Corp. brought in its well No. 33 from 4280 ft. pumping 300 bbls. and has spudded No. 34. Taking in 405 ft. of zone Richfield Oil Co. plugged Bixby No. 5 at 4530 ft. after bottoming at 4583 ft. and completed at the initial rate of 300 bbls.

Adjacent to the field's discovery well at Temple and Hill streets, Texas Co. has set an 8⅝-in. water string at 3880 ft. in Wilson Fee No. 1 and is now "drilling in" under pressure, a procedure which is expected to be highly effective in this nearly depleted area.

New Montebello Deep Zone Well

Completing Harvey No. 2, Standard Oil Co. became the fourth company to obtain production in the new western deep zone of Montebello. Bottoming 5780 ft., formation tests indicated the lower portion of the hole to be wet and the hole was plugged to 5548 ft. where a liner was landed and the well swabbed in from a 160-ft. interval below the shoe of the water string. With two 1½-in. beans the initial flow was gauged at 1116 bbls. of 36 gravity oil cutting less than one per cent. Now curtailed with a 40/64 in. orifice, production is 700 bbls. of clean oil.

Formation tests of the fifth zone from the shoe of the casing at 5435 ft. to 5545 ft. resulted in a 1600 bbl. rate of flow cutting 30% in Union Oil Co.'s Howard & Smith No. 1. New hole is now being made below that point.

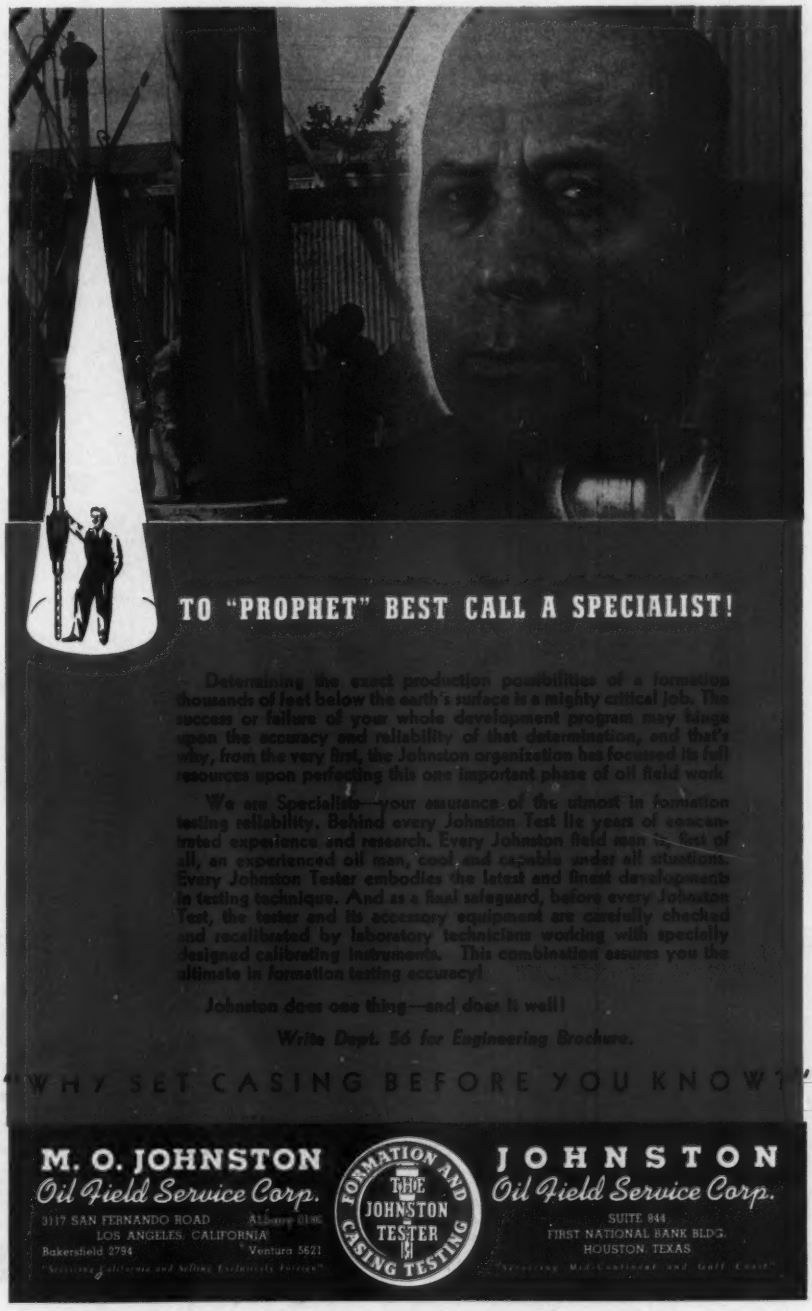
Next completion for St. Helens Pet. Co. will be Monterey No. 27 which is now 5440 ft. deep with 8⅝-in. casing standing cemented at 5425 ft. Monterey No. 25, which was completed last month as a clean well flowing 1100 bbls. from the fifth zone, perforated a blank section of the liner and recompleted flowing 2400 bbls. gross fluid cutting 18%. St. Helens Eggleston No. 1 and Monterey No. 28 are each drilling above 4000 ft.

Brookline Oil Co. Drake Comm. No. 1, located near the intersection of Maple and Beverly Blvd. and the most southwesterly well in the field, found the fifth zone wet and is now drilling below 6185 ft. for a test of the sixth.

None of the recent independent entrants in the field have yet attained critical depths, West Montebello Oil Co. now being only 1100 ft. deep and Hurley-Kelley and V-8 Oil Co. both being less than 5000 ft. Expected soon to spud are F. E. Fairfield, M. L. W. No. 1 on the reservoir site and Montebello Wesco, Inc., both apparently well in the play.

With only the interval 4622-4650 ft. open, Winrock Oil Co.'s southwest outpost was completed on the pump gauging 130 bbls. cutting 30%.

The field's two outside wells are now to all intents and purposes abandoned, Marvell Oil Co. No. 1 having stopped at 4505 ft. and Kramildon's unsuccessful test at 6860 ft.



Rosecrans Map

Contained in this issue is a portion of the California State Division of Oil & Gas map of the now active area in the Rosecrans field. Reduced one half to conform to proper page size, the scale is one inch equals 800 ft. It is hoped this reproduction will be of use to our many readers who are interested in this field.

Rosecrans Deep Well Completed For 1220 Bbls.

Latest well to be completed in the new deep zone development in the Rosecrans field is Universal Consolidated Oil Co.'s Trust No. 3 near the intersection of Rosecrans and Figueroa streets. Bottomed at 7715 ft., 8⅝-in. casing was set at 7412 ft., and a perforated lined landed. With 2½-in. tubing at 75559 ft., the well was swabbed in flowing 1220 bbls. of 32 gravity oil cutting 2.2%. Drilling equipment has been moved to Trust No. 4 which is now drilling below 1000 ft.

Union Oil Co. now has three strings of tools working on the Rosecrans lease, all at depths above 6000 ft., Nos. 20 and 23 being located near the Pacific Electric tracks and No. 21 at the corner of Main and Rosecrans.

Barnsdall Oil Co., Trust No. 4, is drilling below 5521 ft. in the western sector and Rosecrans No. 9 is being spudded near Superior Oil Co.'s Maxwell Comm. No. 8, completed recently for 350 bbls. Offsetting Maxwell No. 8 to the southeast, Superior is drilling Callender No. 1.

On the strength of the Superior completion, Howard Oil Co. has resumed the redrilling of the old abandoned Union well, Gordon No. 1, located at the west bend of Main Street. When last reported, the company was fishing drill pipe after making new hole to 6075 ft.

Costa Mesa Test Gets Oil Sand Stringers

The A. V. Oil & Gas Co., drilling at Costa Mesa in Orange county, has encountered stringers of oil sand after entering the Miocene, the first shows being noted at 2950 ft. and continuing to present bottom of 3025 ft.

Bulk petroleum shipments from Los Angeles harbor during the week ended May 28 totaled 1,272,592 bbls, more than 400,000 bbls. greater than the total for the previous week, it is reported by the Chamber of Commerce Marine Exchange.

Interest Growing in San Fernando Valley

Prospects of the San Fernando valley becoming an oil center have been greatly enhanced of late with the spudding of Tide Water Associated's Aliso Canyon well, Porter No. 1, and persistent rumors that another major company will soon start a test well near Reseda.

Spud Wildcat In Sec. 22, 2-8

Renewing interest in the Chino area of San Bernardino county, Southern Counties Petroleum and Drilling Co. has spudded its first well on the Los Serranos Country Club property in sec. 22, 2s-8w. Light gasoline driven equipment is being used.

Should production be obtained here, it would not be the first where club members have shared in royalties from their golf course. Small, high gravity production has been obtained for years from the links of the Potrero Country Club at Manchester and Prairie streets, near Inglewood. If no oil is found, it would neither be the first instance where members have been disappointed, as several dry holes have been drilled on thte Virginia Country Club property at Long Beach.

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Third Newhall Well Strikes Oil Pay

After topping the first oil showings at 6170 ft., Barnsdall Oil Co. Rancho San Francisco No. 3 has bottomed at 6553 ft. and is standing cemented with 8⅝-in. casing set at 6242 ft. Apparently somewhat higher than the first two wells, No. 3 has cored excellent sands and should at least equal the 1660 bbl. production of No. 2.

Shell Weisel Test Proves Dry Hole

Concluding for the time being its exploration work near Anaheim in Orange county, Shell Oil Co. has abandoned Weisel No. 1 at 5994 ft. Although a few faint shows were reported, the well at no time looked as good as did its two predecessors, Mathis No. 1 and Harbeson No. 1 which were drilled and abandoned last year.

California Crude Oil Production

For Two Weeks Ending June 11, 1938

Field	June Daily Quota	Average Daily Production	Excess
San Joaquin Valley			
Belridge—North	15,275	12,312	*2,963
Belridge—South	1,830	1,092	*738
Buena Vista	17,630	18,235	605
Canal	2,255	2,187	*68
Coalinga—East-West	16,080	9,534	*6,546
Coffee Canyon	2,995	3,934	939
Edison	2,580	2,664	84
Elk Hills	8,235	10,755	2,520
Fruitvale	6,975	8,637	1,662
Greeley	3,700	3,958	258
Kern Front	8,436	8,509	73
Kern River	5,330	2,415	*2,915
Kettleman No. Dome	66,165	70,537	4,372
Lost Hills	4,395	3,607	*788
McKittrick	3,445	3,161	*284
Midway	45,475	38,557	*6,918
Mount Poso	14,950	18,212	3,262
Mountain View	9,225	11,155	1,930
Rio Bravo	2,265	3,820	1,555
Round Mountain	10,375	11,064	689
Ten Section	6,605	6,461	*144
Other Fields	2,665	2,630	*35
TOTAL	256,886	253,436	*3,450
Coastal Counties			
Elwood	5,390	6,836	1,446
Rincon	2,950	4,126	1,156
Santa Maria	8,595	6,494	*2,101
Santa Maria Valley	18,150	6,894	*11,256
Santa Paula-Newhall	5,055	4,900	*155
Ventura Avenue	33,310	35,641	2,331
Other Fields	5,840	6,138	298
TOTAL	79,310	71,029	*2,281
Los Angeles Basin			
Alamitos-Seal Beach	8,270	8,614	344
Brea-Olinda	8,610	5,665	*2,945
Coyote—East	2,925	3,434	509
Coyote—West	8,440	9,016	576
Domingues	22,640	27,439	4,799
El Segundo	8,078	10,357	2,279
Huntington Beach—New	14,293	19,463	5,170
Huntington Beach—Old	13,780	15,786	2,006
Inglewood	14,560	14,797	237
Long Beach	46,810	58,161	11,351
Montebello	6,793	7,369	576
Montebello-West End	1,812	4,992	3,180
Playa del Rey	5,920	6,725	805
Richfield	8,250	8,664	414
Rosecrans-Athens	4,630	7,189	2,559
Santa Fe Springs	31,430	34,654	3,224
Torrance	8,215	9,720	1,505
Wilmington	65,285	92,670	27,385
Other Fields	2,713	2,728	15
TOTAL	283,454	347,443	63,989
STATE TOTAL	619,650	671,908	52,258

*—Shortage.

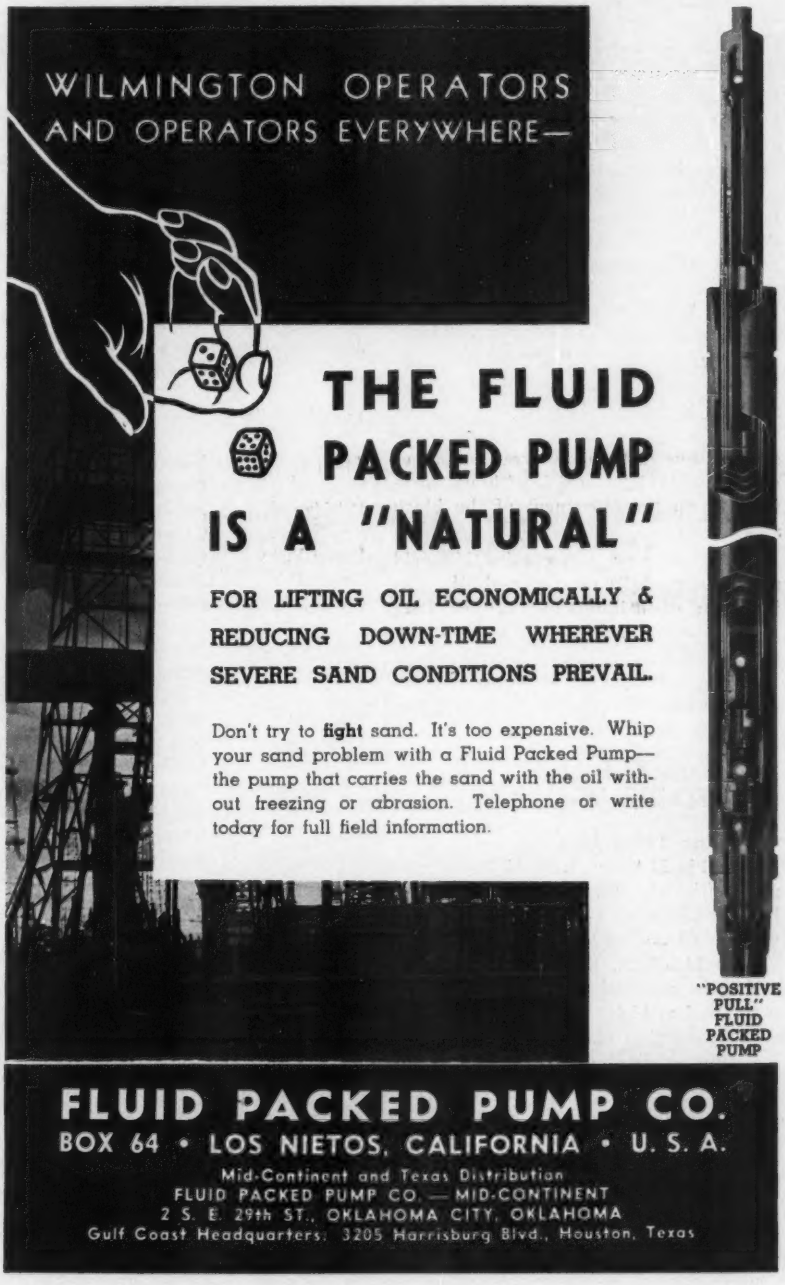
D & B Big Gusher Near Torrance

Most important discovery in the Los Angeles Basin in many months is credited to the D & B Oil Co. on the completion of their southeast Torrance outpost located at the intersection of Vermont and 253rd St. Swabbed in June 19, the first gauge showed a rate of 600 bbls. of 29.2 gravity oil cutting 15%, later cleaning up to 2%. Gas flow was estimated at 2,500,000 ft.

Drilled to 5275 ft., 8⅝-in. casing was cemented at 5120 ft. and a perforated liner landed on bottom. It is probable that the productive horizon is a continuation of the 5000 ft. zone in the Lomita area.

The D & B Oil Co. is a Pasadena concern with O. H. Wopschall, president; A. G. Burtt, vice president; A. E. Schultz, secretary and O. T. Deal as field superintendent. The company controls a total of 100 acres in the new field through its affiliate, the Dawn Oil Co.

Revised tentative specifications for fuel oils and a new tentative method of test for sediment in fuel oil by extraction have been issued by the American Society for Testing Materials.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San Joaquin Valley

Wasco Deep Area Becoming Real Field

Wasco, site of the world's deepest oil well, is now taking on the appearance of a real oil field. In addition to the flowing discovery well, three new rigs have sprung up and work has been resumed on a well long idle.

Continental Oil Co., discoverer of the field, has spudded in KCL No. A-3 near the famous A-2 in sec. 8,27-24 and has started deepening its former joint venture with Seaboard and Tide Water Associated in sec. 26. The latter well, known as Continental Oil Co., Seaboard-Associated KCL No. C-1 is now deepening below 11,400 ft. after being suspended nearly a year at 10,244 ft. It is said to be checking nearly 500 ft. higher than the famous discovery well.

Standard Oil Co., which incidentally probably holds most of the acreage in the new field, is drilling KCL 8-B-1 in sec. 17,27-24 below 7000 ft .and Mushrush No. 1 in sec. 7 below 2000 ft. Beside the heavy engines, draw works and pumps now standard in the deep valley fields, Mushrush No. 1 will be the proving ground for the new type derrick whose sides are nearly vertical to a point above the top of the 120 ft. drill pipe stands, thus allowing a greater number of stands to be stacked without interfering with the movement of the block and elevators.

The three new projects in this field are the first wells ever started with the intention of drilling to the not long since unheard of depth of 13,000 ft., the nearest approach being the group of wells now drilling at Rio Bravo which must go 11,500 ft.

Standard KCL 11-2 Is 14,022-Bbl. Well

Gauging 14,022 bbls. of 35.1 gravity clean oil in 24 hours, KCL 11-2 was completed frim the Rio Bravo zone at Greeley as California's largest producer in many years. Drilled by Standard Oil Co. to 11,520 ft., the top of the zone, which is correlative with the Vedder, was cored at 11,419 ft. and 6⅝-in. casing was cemented at 11,396 ft. before landing a perforated liner on bottom and completing through 2½-in. tubing in the conventional manner. The gas flow accompanying the initial gauge was estimated at 15,000,000 cu. ft. Although a ¼-in. tubing bean and two casing beans, 1½ and 1-in., were used, the tubing pressure registered 1200 lbs. and the casing pressure 770 lbs. Conforming to curtailment practices, the well is being shut in, and probably will remain so until July 1. While being gradually pinched back, a 24 hour gauge with a ¼-in. tubing bean and a 36/64-in. casing bean was 4260 bbls. with pressures of 1425 lbs. on the former and 1510 lbs. on the latter. Gas production was 5,880,000 cu. ft.

KCL 11-2 is located 990 ft. south and 330 ft. east of the northwest corner of sec. 20,29-26, very nearly in the center of production from the "shallow" Greeley zone, which is encountered at approximately 7800 ft. Repeated tests of this horizon failed to result in any oil recovery and the well stood idle many months until the tremendous possibilities for deeper production were realized after the completion of Union Oil Co.'s Kernco No. 2 at Rio Bravo, four miles northwest.

Buena Vista Deep Zone Believed Major Discovery

Discovery of a second apparently productive oil sand stratum near the 11,000 ft. level has now put Ohio Oil Co.'s KCL A-7 at Buena Vista definitely in the major discovery class. The upper oil sand, which is several thousand feet below the developed gas zone, correlates with the Stevens sand of Ten Sections and was well saturated for a distance of 120 ft. below its top at 10,020 ft. No test was made of this sand but no doubt

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Fresno County					
Coalinga	Magnet Oil Co., Fearon	2	18, 20-15	1550	Drilling
	Petroleum Sec., Gatchell	2	18, 20-16	6849	Testing
	Univ. Cons. Oil Co., L. H.	1	12, 20-15		Rig
	Wilcox, J. F.	6	11, 20-14	566	Pumping
E. Coalinga	Pure Oil Co., SPL	1	31, 18-17	10861	Redrilling
Clovis	Central Valley Oil Co.	1	1, 12-20	588	Idle
Jacalitos Hills	Jacalitos Pet. Co.	1	14, 21-15	5745	Cleaning out
	Dauphin Dev., Boone	1	30, 21-14	3780	Testing
		2	30, 21-14		Grade
Panoche Hills	Panoche Hills Oil Co.	3	12, 14-11	300	Idle
Kern County					
Arvin	Petrex, Inc.	1	32, 31-30	5100	Drilling
	Union Oil Co., Berry	1	15, 31-29	6812	Testing
Belridge	Abbott, F. E.	1	18, 27-19		Rig
	General Pet., St. Helens	1	12, 28-20	8683	Testing shallow zone
Buena Vista	Ohio Oil Co., KCL	A-8	32, 31-26	11050	Drilling
Devils Den	Amerada Pet. Co., Beer	5	22, 16-19	8295	Redrilling
	Gibson Oil Co., Alferitz	3	14, 25-18	512	Testing
	Goodrum, Geo., Baron	1	24, 25-18	1210	Testing
Dominion	Dean, Geo. W.	1	26, 26-28	1050	Drilling
Edison	Johnson, G.W.Brown-Paulette	1	33, 29-30	1130	Drilling
	Stevens, Ray	1	22, 30-30	450	Drilling
Elk Hills	Richfield Oil Corp. KCL-W	1			Location
Fruitvale	The Texas Co., C.W.L.,	1	7, 29-27	4626	Drilling
	Continental Oil Co.	B-2	12, 29-26		Rig
Grapevine	Petrol Corp., Reserve	5	33, 11-19	4275	Drilling
	Richfield Oil Corp.	KCL-1	28, 11-20	3950	Drilling
Lerdo	Standard Oil Co.	KCL 18-1	29, 28-26	9110	Drilling
McFarland	Tide Water Assoc. Oil Co.,	Pond 1	17, 26-25	5010	Drilling
	Shell Oil Co., KCL	83–35	35, 26-25	7825	Drilling
Mt. Poso	Shell Oil Co., Durnal	1	24, 27-28	749	Abandoned
Poso Creek	Reynolds Oil Co.	1	30, 27-27	2855	Idle
	Harkness & Laws, Hunt	1	28, 27-27		Foundation
Richgrove	Dilamar Oil Corp., Quinn	1	15, 25-27	2956	Testing
		3	15, 25-27		Rig
San Emigdio	Shell Oil Co.,	KCL 4-26	26, 11-22	9825	Fishing
Strand	Continental Oil Co.	E-1	17, 30-26	8287	Testing
Temblor Hills	Chico Martinez Oil Co., Holly	1	1, 29-20	1108	Testing
Kings County					
Dudley Ridge	Falcon Oil & Gas Co.	No. 1	24, 23-20	6500	Idle
Pyramid Hills	Pyramid Prod. Co., Retherford	1	27, 24-18	3090	Idle
Kettleman	Temblor Oil Co., Bunting	1	25, 23-18	9138	Plug 7815—Idle
Tulare County					
Alpaugh	Sullivan & Youngdahl	1	33, 23-23	2732	Cleaning out
Ducor	Nelson & Davison	1	1, 24-27	375	Idle
Trico	Caminol Co., A. O. G.	3	29, 24-24	7555	Prep. to deepen

existed as to its possible productivity so the well was carried down seeking yet deeper hosizons. Below the Stevens, streaks of oil sand were cored between 10,450 and 10,500 ft., but were not regarded as being capable of production. At 10,975 ft. the drill again entered streaks of sand showing oil and eight feet of good oil sand was recovered in a core to 11,030 ft.

The well is located in sec. 32,31-26 and is in the center of the Buena Vista gas field discovered and entirely controlled by the Ohio Oil Co.

Sec. 17, 30-26 Test Drilling Out Liner

Continental Oil Co.'s Strand wildcat, KCL E-1 in sec. 17,30-26, has abruptly changed status from being the discoverer of a new field to being just another interesting deep exploratory well. Having cemented a securaloy liner at the plugged depth of 8262 ft., and gun perforated and thoroughly tested by stages the entire thickness of the Stevens sand from 8245 to 8190 ft., the zone was determined to be wet. The aluminum liner is now being drilled up preparatory to deepening.

Richfield Planning Union Avenue Test

Eleven years ago the Western Gulf Oil Co., then the Pacific Eastern Production Co., drilled a well which was heralded at the time as being the discoverer of a new and great field. On a short test from 4392 ft. a flow estimated at 8,000,000 cu. ft. of gas with a fine spray of oil was obtained before sanding necessitated a clean out job. Bakersfield old timers will never forget the wave of excitement which swept the town as the great news was passed along, resulting in one of the wildest scrambles for leases ever seen in the San Joaquin valley.

Repeated attempts, however, failed to result in any further demonstration and in the ensuing months, several more wells were drilled by Pacific Eastern and others, none finding any oil sand, or even the gas "kick" encountered in the first. Considered deep wells at the time, the deepest was only 5641 ft.

With this background, Richfield Oil Co., after exhaustive seismic surveys, has leased practically everything in that "play" of eleven years ago and will soon announce the location of its first well, which according to rumor, will be in sec. 6,30-28. Very few indeed are those who witnessed that now historical test who do not, down in their hearts, have a hunch that the once dreamed of Union Avenue field will in 1938 become a reality.

Seek to Extend R. Mountain Field

Seeking an extension of Round Mountain production, Golden Bear Oil Co. has made a location for Skelton No. 1 near the north quarter corner of sec. 11, 28-28.

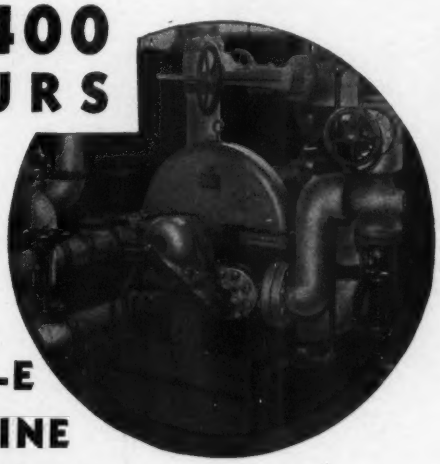
Shamrock Oil Co. No. 7 in sec. 6,28-29, pumped 200 bbls. of gross fluid cutting 65% when completed from a total depth of 1590 ft. The 8⅝-in. casing was cemented at 1558 ft.

Only small production was obtained by Shell Oil Co. in the completion of Olcese-Lilly No. 3 in sec. 21,28-29, the first few days averaging 50 bbls. cutting 10%. Depth is 1633 ft. Caldwell No. 20 in sec. 7 is standing idle after finding the Vedder barren at 1960 ft.

Seek New Production Near Edison, Sec. 22, 30-30

Searching for new production near Edison, Ray W. Stevens has spudded a well in sec. 22,30-30.

44,400 HOURS



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Four Majors Test North of Fruitvale

Playing the northwest continuation of a line drawn through the Mountain View and Fruitvale fields, four major companies are drilling important wildcat wells. Immediately northwest of Fruitvale, The Texas Co. is approaching 4700 ft. in Camp-West-Lowe No. 1 in sec. 7, 29-27. Near Lerdo, Standard Oil's KCL 18-1, sec. 29,28-26, has passed 9100 ft.

Shell Oil Co., KCL 83-35 in sec. 35, 26-25, is over 7950 ft. in depth, and Tide Water Associated, Pond No. 1 is below 5000 ft. Both the latter wells are situated near McFarland.

Each of the four has been located as the result of extensive geophysical surveys and each represents a better than average wildcat bet.

Devils Den Area Test Costly to Amerada

One of the most costly wildcat wells now being drilled is that of the Amerada Pet. Co. near Devils Den. Beer No. 5, located in sec. 22,26-19, formations have been very hard, causing the hole to drift as well as numerous twistoffs. After once reaching a depth of 8298 ft., the well is now being redrilled at 7320 ft.

Dozen Strings Run In Rio Bravo Field

Most active of the new valley floor fields is Rio Bravo where an even dozen rigs are now working. Of this number, three have entered the oil sand and soon will be on production. Still the leader in development, Superior Oil Co. has two wells nearing final depths, another, Geissinger No. 2, coring for the pay below 11,260 ft., and two wells at lesser depths, Geissinger No. 3 at 7200 ft. and Helbling No. 1 at 10,800 ft. Anderson No. 1, a northerly outpost, set 7-in. casing at the top of the Rio Bravo zone, 11,385 ft., and is drilling in oil sand at 11,604 ft. Wagner No. 4 is coring in the zone after encountering the top at 11,370 ft.

General Petroleum Corp., Wagner No. 2, probably will actually flow before either Superior well, it having topped the sand at 11,283 ft. and stopped drilling at 11,500 ft. This will be the company's first production in the field, Wagner No. 1 having been delayed by a side tracking job after the hole had reached 10,200 ft. in depth.

Union Oil Co., discoverer of the field, is redrilling Kernco No. 34-2 at 6100 ft. after losing the 11,204 ft. hole due to collapsed casing. Kernco No. 34-3 is drilling below 10,800 ft. and 34-4 is preparing to spud.

Geo. F. Getty, Inc., is drilling Ramsey No. 2 below 8500 ft.

New Casing Program Success in Mt. Poso

Introducing a new casing program to the Mount Poso district, Vanguard Oil Co. completed Baker No. 11 in sec. 23, 27-28 by drilling through the Vedder zone, cementing 6⅝-in. casing on bottom, and gun-perforating the interval to be produced. Heretofore frowned on by the Division of Oil & Gas as not providing sufficient protection to upper water sands, the small pipe was centered in the 9⅝-in. hole and cement circulated to the surface before "shooting" the interval 1708-1722 ft. That the result was all that could be desired was indicated by the potential test on which the well pumped at the rate of 504 bbls. per day, very good for this portion of the field. The sand entry, which totaled 17% during the test, dropped to practically nothing when the pump was slowed to the well's normal 200 bbl. production rate.

Advantages of this method are that smaller hole is drilled, less time is required and costs are reduced by using

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one string of 6⅝-in. casing instead of an 8⅝-in. water string set over the zone with a perforated liner landed on bottom.

Interesting Valley Maps Completed by Price Co.

Two new maps covering a large portion of the central San Joaquin valley, including most of the present "hot spots", are now being offered by the Bakersfield firm of Earl M. Price & Co. Drawn to a scale of 1 in. = 2000 ft., well locations and property ownerships are clearly indicated and are revised to recent date. The Wasco-Shafter map extends from the Rio Bravo oil field on the south to include the Continental Oil Co.'s record deep producer at Wasco and the Semitropic gas field on the north. The Ten Section-Greeley map not only includes those two fields but extends north to take in Rio Bravo as well as Canal and Canfield Ranch.

Mount Poso Recovery 3 Small Producer at 1600

Only a small amount of oil was produced in first tests of the Vedder zone in Master Petroleum Corp.'s Recovery No. 3 in the Dominion area of Mount Poso. Located in sec. 33,26-28, casing was set at 1585 ft. and with hole open to bottom at 1600 ft., production on the pump was estimated at 15 bbls. a day cutting 75%.

Two miles northeast of the Master well, Geo. W. Dean, a Los Angeles fire captain, spudded his first well in sec. 26,26-28.

Kern River Field Activity Increased

The perennial Kern River field is now enjoying a bit of activity in sec. 34,28-28 where Helm & Smith and Hast Oil Co. are now drilling and completing 10-bbl. wells at depths ranging from 390 to 650 ft. Due to the ease of drilling to these shallow depths, only a few days are required to drill and complete each well and the costs are proportionally low.

Caminol to Deepen For Trico Oil Test

The Caminol Co., Ltd., first of the conservative independent group to try for deep valley floor production since the recent important discoveries, has installed heavy equipment in the A. O. G. No. 3 well and is ready to clean out and deepen below the old 7555 ft. bottom. The well is located in sec. 29,24-24, northeast of the Trico gas field.

Shell Gets 2817 Bbls. In Ten Section B-58

Shell Oil Co. continues to obtain excellent completions in the Ten Section field, the latest being KCL B-58 in sec. 30,30-26 whose initial was 2817 bbls. of 33 gravity clean oil before shutting in to the customary small allowable. Total depth of the hole was 8220 ft. with 7 in. casing cemented at 7911 ft. The company's next producer will be KCL A-38 in sec. 29 which is preparing to complete after topping the Stevens sand at 7900 ft. Shell has three other wells drilling, one rigging up and location staked for another.

Continental to Test In Section 12, 29-26

Continental Oil Co., long one of the most active companies in exploration work, is now joining its distinguished fellows, Standard Oil and The Texas Co., in seeking another field on the Mountain View-Fruitvale trend. The location chosen for KCL B-2, the new test, is in sec. 12,29-26, 1600 ft. east of KCL B-1 which was abandoned after the original 10,205 ft. hole was recored through showings encountered at 9600 ft.

Wilshire to Test Grapevine Area

Kern county's Grapevine area, long an enigma to oil operators, is soon to have another test according to a recent announcement of the Wilshire Oil Co. Location for the new well, which will be known as Tejon No. 1, has been chosen near the center of the sw¼ of the sw¼ of sec. 34,11-19, approximately half a mile east of the Universal-Wilshire-Barnhart & Morrow pumper in sec. 33. The latter well was first completed as a gasser with a small oil yield, but after deepening, pumps about 70 bbls, with very little gas.

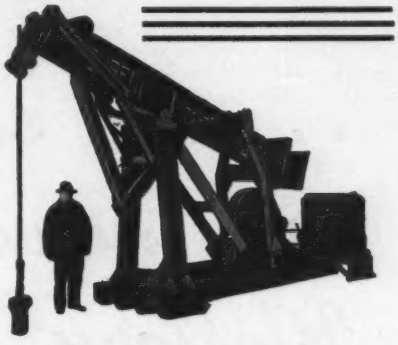
The Petrol Corp., Reserve-Petrol No. 33-5, also located in sec. 33, is drilling in hard shale below 4000 ft. and should shortly pick up the sands productive in the Universal and old Reserve wells.

General Petroleum Test In N. Belridge Fails

St. Helens No. 1, North Belridge area wildcat of General Petroleum, failed in finding deep production to 8683 ft., and now on test of small showings is beginning to look like a total loss. While drilling above 2000 ft., the well on several occasions tried to blow out, but now plugged to 1400 ft., only a small quantity of oil is being recovered on a production test.

Richfield to Test Deep Valley Floor

Latest of the major companies to enter the search for deep valley floor production is Richfield Oil Corp. with its announcement of a new wildcat location in sec. 32,30-25, five miles west of Ten Section and seven milese due northwest of Ohio Oil Co.'s Buena Vista discovery. The old Elk Hills field lies one mile due west. The well will be drilled on property of the Kern County Land Co. and will be known as KCL-Western No. 1.



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Progress Slow In Santa Barbara Tests

But little encouragement has lately been met with in Santa Barbara county exploratory wells. Douglas-Stratton Oil Co.'s Carreaga test in sec. 32,4-24 is drilling below 5600 ft. after topping the Brown Shale at 5200 ft. and will probably have to make several hundred feet more hole before opening the zone from which the Apache well produces a small amount of oil.

Standard Oil Co. has again had to back up and redrill its Los Flores Land & Oil No. 1, the present bottom being 5260 ft., nearly 300 ft. short of the original depth.

At Coal Oil Point, South Crude Oil Co. is making excellent time on its Permit No. 191-2, a redrill job on the old Bolsa Chica lease. Last reported depth was 3385 ft. in the new hole.

J. E. O'Donnell, Helen No. 1 in sec. 8,7-33 near Lompoc, is drilling in a very hard gray shale below 3642 ft., with no showings yet encountered.

Carpinteria Oil Co., operating in the town of the same name, has attained a depth of 2380 ft. and is said to have found heavy oil showings in the Miocene.

On the Hollister ranch in sec. 35,5-33, Wilshire Oil Co. and Gaviota Oil Co. are each dogged with a hard luck jinx. The former company's well, now down 4325 ft., has found good looking sands in the Sespe but which on formation tests appear either wet or unproductive while the latter company is at present unable to produce anything but salt water from its formerly good gas well.

Lloyd Abandons Test In N. Side Ventura Ave.

Lloyd Corp., headed by Ralph B. Lloyd, abandoned its first Ventura Avenue north side test at 7500 ft. when no showings of any kind were found to that depth. In the belief that production may still be developed in the area, preliminary work has been started for a second well which will be drilled approximately 4000 ft. west of No. 1.

Oxnard Plains Area Drilling at Standstill

Drilling activity is now completely at a standstill in the Oxnard Plains area with the suspension of the Walter G. Rowe well. Drilled to 4705 ft., continued loss of circulation to upper sands caused many fishing jobs and the well is now idle with a fish in the hole.

Abandon Two Tests In Los Olivos Area

Two wells in the Los Olivos area of Santa Barbara county have recently suspended operations after entering the schist basement, which in this district is found at comparatively shallow depths. Continental Oil Co. has definitely abandoned La Laguna No. 1 in the Franciscan at 2646 ft., but feeling that the possibilities are not yet exhausted, may drill a second test.

United Western Oil Co., which for the past several months has been making slow progress in the schist topped at 2750 ft., has apparently resigned itself to the obvious, and has suspended drilling at 3279 ft.

Hancock Resumes San Luis Obispo Test

After a shut down of over six months, Hancock Oil Co. has again re-entered its San Luis Obispo county wildcat, Sherer-Dickes No. 1 and is experiencing difficulty in cleaning out to the old bottom of 3361 ft.

NORTHERN COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
Colusa	Amerada Pet. Co.,Calif. Lands	1	34, 16-1	2975	Drilling
Glenn	Ohio Oil Co., Willard	2	18, 20-2	5300	Drilling
Humboldt	The Texas Co., Eureka	2	22, 3-1	7708	Plug 6473-Shut in
Monterey	The Texas Co., Lewis	1	13, 19-5		Rigging up
San Mateo	Wilshire Oil Co., Cowell	1	20, 6-5	8007	Idle
Solano	Richfield Oil Corp., Potrero	1	10, 4-1	3303	Drilling
	The Texas Co., Midland	1	4, 3-3	3925	Drilling

COASTAL COUNTIES WILDCATS

Santa Barbara County

Area	Well	No.	Section	Depth	Status
Carpinteria	Carpinteria Oil Co	1	32, 4-5	2375	Cleaning out
Carreaga	Douglas-Stratton Oil Co.	1	8, 8-33	5550	Drilling
Cat Canyon	Standard Oil Co., Los Flores	1	27, 9-33	5530	Redrilling
Coal Oil Pt.	South Crude Oil Co.	191–2	24, 4-29	5510	Redrilling
Gaviota	Gaviota Oil Co., Hollister	1	35, 5-33	3215	Testing
	Wilshire Oil Co., Hollister	1	35, 5-33	4310	Drilling
Gato Ridge	Barnsdall Oil Co., Tog.	3	9, 8-32	2200	Drilling
Los Olivos	United Western, Bradley	1	15, 7-30	3279	Idle
	Continental Oil Co., Laguna	1	24, 8-31	2646	Abandoned
Lompoc	O'Donnell, J. E. Helen	1	8, 7-33	3569	Drilling
Orcutt	Bankline Oil Co., Silva	1	7, 9-33	5558	Abandoned
	Warren Deuel, Garrett	1	12, 9-34		Rig
Refugio	Tweedy, A. E., Penn.	1	34, 5-31	1700	Idle
Summerland	Gauthier Oil Co.	17–1	22, 4-26	1400	Idle

San Luis Obispo County

Edna	Loma Grande Oil Co., Lewis	1	28, 31-13		Rigging up
Elk Horn	Calif. Pet. Prod. Co.	1	6, 10-24	1865	Idle
	Western Plains Oil Co.	1	7, 31-21	4010	Idle
Paso Robles	Ajax Land & Dev. Co., Moss	1	27, 26-13	475	Idle
	Vanguard Oil Co.	1	14, 27-14	4360	Idle

Ventura County

Moorpark	Darby Oil Co., Cohn	1	7, 2-19	1700	Drilling
Oxnard	Walter G. Rowe, Johnson	1	15, 1-22	4715	Idle
Ojai	High Mesa Oil Co.	1	16, 4-22	1690	Drilling
	Holly Dev. Co., Macrate	1	27, 4-23	300	Drilling
Red Mountain	Martin, J. W.	3	15, 4-21	1500	Drilling
Sespe	Commander Oil Co.,Temescal	7-F	13, 4-18	215	Idle
	Condor Oil Co.	1	6, 4-19	2195	Idle
	Garmack Oil Co.	1	28, 5-19	565	Idle
	McKinnis, Chas., Crosby	1	14, 4-19		Grade
	La Salle & Van Dissen	1	15, 5-19		Grade
	Merchants Pet., Cochran	8	1, 4-20	638	Drilling
	Speik Oil Co.	1	33, 5-19	3440	Idle
	St. Louis Oil Co.	1	1, 4-20	420	Cleaning out
	Terry, Geo., et al	1	23, 5-20	1340	Idle
Simi	Trucano, Germanina	1	5, 2-17	1007	Abandoned
South Mt.	The Texas Co., Richardson	5	13, 2-21	5630	Drilling
	Clipper Oil Co.	1	17, 3-20		Rig
Tar Creek	Section 20 Oil Co.	1	20, 5-19	1611	Drilling
Timber Canyon	Stallings, Senter, Ahlberg	1	24, 4-21	675	Idle

Carranza 2 Completed For 3500 At Santa Maria

Pacific Western Oil Co., which already had established an enviable record of completions in the Santa Maria Valley field, finished Carranza No. 2 as one of the field's best producers. Located near the east quarter corner of the northeast quarter of sec. 28,10-34 and just west of the "hot spot" in sec. 27, the top of the Monterey was found at 4517 ft. and the top of the Franciscan at 4977 ft. With 8⅝-in. casing cemented at 4532 ft. and the hole bottomed at 4992 ft., a perforated liner was landed and the well swabbed in with the initial flow estimated at 3500 bbls. of 15.5 gravity oil cutting 4%.

Two sec. 27 completions were obtained by Union Oil Co. Mallory No. 1, located in the center of the northwest quarter, was brought in from 5021 ft. flowing initially 1436 bbls. in 12 hours with 920,000 cu. ft. of gas through a one inch bean. With bean reduced to 20/64 in., production was 1650 bbls. cutting 6%. McCoy-Cooney No. 1, south and west from the center of the section, was finished at 5285 ft. pumping 830 bbls., clean. Both wells are now shut in.

In sec. 26, Signal Oil & Gas Co. added 800 bbls. to its field potential with the completion of Yelkin No. 12 which was bottomed at 4955 ft. after having cored the top of the Santa Margarita at 4358 ft. and set an 8⅝ in. water string at 4380 ft.

Bankline Abandons Sec. 7, 9-33, Orcutt Test

Failing to find the Monterey at expected levels, Bankline Oil Co. has abandoned its test of the Silva property in sec. 7,9-33, near Orcutt. When formations no lower than the Sisquoc were encountered to 5558 ft., it became evident that further exploration would be useless and the company has again turned its attention to the Wilmington field where it holds valuable properties.

Gatchell 2 Production Test Awaits State Approval

The long awaited production test of Petroleum Securities Co., Gatchell No. 2, may be history by the time this publication is in the hands of its readers. At present writing, a water shut off test is being made on 8⅝-in. casing which is cemented at 6690 ft. If an OK is received from the State, the 6849 ft. hole will be cleaned out and a production test made of the Avenal (Eocene) oil sands which were topped at 6710 ft. If expectations of company officials are fulfilled and a large well is obtained, it is believed much of the old Coalinga field will be included in the deep drilling boom which is sure to follow.

Pioneer Anticline Test Delayed by Troubles

The Texas Co.'s important test of the Pioneer Anticline, Pioneer Unit Plan No. 1, has not yet made an adequate test of the Eocene oil sands found below 8375 ft. Mechanical difficulties have persistently pursued this well and the hole is now being redrilled for another try.

Union Berry 1 Arvin Is Failure at 6135

Union Oil Co., Berry No. 1, located between General Petroleum's small Houchin No. 1 near Arvin and the Mountain View field, has proved a severe disappointment to many who had built up high hopes on the strength of core showings. With the redrilled bottom at 6135 ft. and 8⅝-in. casing cemented at 5908 ft., production to date has been only a small amount o fwet oil.

Opponents of the tideland oil bill passed at the last special session of the California Legislature on June 3 filed in Sacramento 6718 signatures from Los Angeles County to a referendum petition which would place the act on the November ballot.

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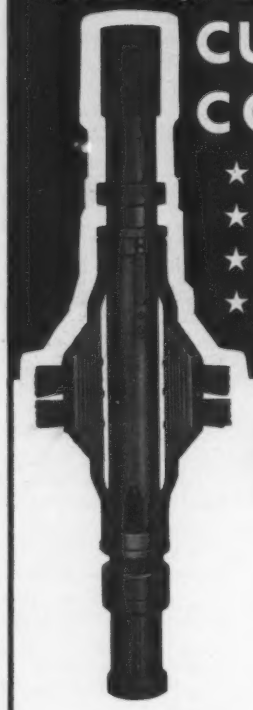

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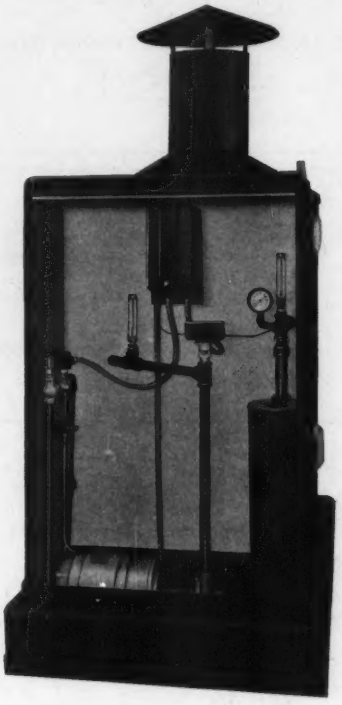
Highly Efficient Field Crude Heater

Of particular interest to all oil field operators is the new Torrance Heater which takes the place of expensive boiler maintenance for heating crude oil in the field. Developed by one of the largest manufacturers of steam cleaning devices, the Torrance Heater is extremely compact and its operating economy is revolutionary, the manufacturer states.

The unit operates on the heat-saving closed circuit principle, and uses super heated water as the heat circulating medium. A spiral heating coil, scientifically designed to expose the maximum heating surface to a gas flame, quickly heats water under high pressure to over 350° F. This super heated water is then circulated through a heat exchanger (which may be coils in a sand trap, sump or storage tank—or a jacketed pipe line) where it gives up its heat to the oil and returns to the base of the unit again. There is no loss of water, for the circuit is completely closed and the same fluid is circulated over and over again. Only the amount of heat actually absorbed by the oil (plus the small amount lost in the conduit pipe) need be replenished by the heater!

One of the most important features of the Torrance Heater is its fully automatic operation. It will operate day-in and day-out with minimum attendance. The water in the circulating system is automatically maintained at exactly the right level; a thermostat automatically regulates the heat in the system at any pre-set temperature; an electric pump automatically keeps the water circulating at the proper speed for maximum heat transfer; and pop-off and safety shut-off devices automatically turn the heater off and relieve the boiler in cast of an electrical disconnection or excessive pressure.

Because of these automatic features, the Torrance Heater operates continuously with minimum attention. In fact, it is so completely trouble-free that provision has been made for locking the unit to discourage tampering. This fully automatic operation is a big labor saving advantage over steam boiler maintenance which requires a licensed operator in constant attendance.



Throughout, the unit is built to withstand the hard service of oil field usage. The coil assembly is completely welded and there is not a threaded joint within the heater shell. The Torrance Heater is available in three sizes with heating capacities from 280,000 B. T. U.'s per hour to 1,200,000 B. T. U's. per hour Each unit is completely self-contained in a water-proof, weather-proof and tamper-proof steel case. A folder fully describing the Torrance Heater may be obtained by writing the Torrance Heater Co., P. O. Box 144, Torrance, Calif.

Oakite Representative Named for Coast

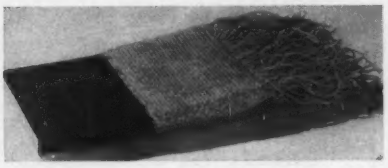
Expanding their southern California sales and service staff, Oakite Products, Inc., makers of cleaning compounds for the oil industry, announce the recent appointment of W. O. Treanor as representative for San Diego and surrounding territory.

Through his previous business experience, supplemented by an extensive survey over a period of several months of the application of Oakite methods to many fabricating processes, Mr. Treanor is well qualified for his new post, and brings to industrial plants of this section closer cooperation and technical service in their production and maintenance cleaning operations. He operates from the western division office at 5504 Hollywood Blvd. in Los Angeles.

Preparations for a major petroleum exhibit at the Golden Gate International Exposition, carried forward jointly by leading companies for some months, have reached a concrete stage in the signature by a new corporation formed for the purpose with the exposition company for 40,000 square feet of exhibit space.

New Rotary Brake Lining

Johns-Manville announces the development of an entirely new type of woven rotary lining in which cabled yarns are used. These asbestos "cables" are woven into a compact mass, impregnated to increase heat resistance and frictional qualities, and then compressed. The result is an unusually efficient and enduring lining for heavy-duty work.



The new lining—known as Style No. 420—is the product of years of research and practical testing of brakes on rotary draw works used in drilling oil wells. It is applicable to wells of all depths, and is particularly recommended for deep drilling according to the makers. A principal feature of the material is unusually even feed-off, giving better control of drilling, it is claimed. The lining also is designed so that even at the extreme temperatures caused by heavy loads, braking efficiency remains high.

Tests have demonstrated that the lining has long life. Its use, the manufacturer says, also reduces the scoring of drums, resulting in more efficient drum service.

Ensign Gas Filter

At the request of many large users of Natural Gas Engines, the Ensign Natural Gas filter as shown in the photograph above, was designed for installation in the gas supply line, to filter out any foreign matter that might be present.

This filter is so constructed that it may be installed in a vertical or horizontal pipe line. The **inlet** and the **outlet** are plainly marked. The filtering element is easily removed for cleaning or replacement. The Ensign Natural Gas Filter is made in two sizes for installation in 1-inch and 2-inch pipe.

The Ensign Carburetor Co., Ltd. is now offering their new Natural Gas Filter as another addition to their complete line of Natural Gas and Butane carburetion equipment.

Gaging and sampling well production by the use of meters was discussed by Henry Brett of the Union Oil Co. of California at the regular monthly meeting of the Topical Committe on Drilling and Production Practice on June 7 at the Los Angeles Athletic Club. D. L. Caldwell of the Barnsdall Oil Company was chairman.

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MAPS

Newly-revised map of 140,000 acres from Shafter to Gosford, in Kern Co., Calif., including Rio Bravo, Greeley, Ten-Section, Canal & Canfield Ranch Oilfields. Shows owners, leases, wells. One inch to 2,000 ft., $4.85 plus 15c tax. Similar map Wasco, Shafter, Rio Bravo & area around deep Continental well, same price. Both maps $8.74 plus 26c tax, prepaid.
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BELTING WANTED

Belting wanted, used, heavy oil field and mill rubber and leather belting. State quantity, send sample, and quote price. Richardson, Cawker, Kans. 6-20-b

Oil Men's Calendar

September

5-9—American Chemical Society, Milwaukee, Wis.

14-16—Santa Barbara, Calif., annual meeting Pacific Coast Gas Association, Biltmore Hotel.

14-16—National Petroleum Assn., 36th Annual Meeting Hotel Traymore, Atlantic City, N. J.

21-23—National Industrial Advertisers Assn., Inc., 16th Annual Meeting, Cleveland, Ohio.

October

6-7—Society of Automotive Engineers, National Regional Fuels & Lubricants Meeting, Tulsa, Okla.

6-7—Petroleum Division A.I.M.E. fall meeting, San Antonio, Texas.

6-8—American Institute of Mining & Metallurgical Engineers, Industrial Minerals Division, Knoxville, Tenn.

13-15—Society of Automotive Engineers, Aircraft Production Meeting, Ambassador Hotel, Los Angeles, Calif.

20-21—Industrial Minerals Division and Petroleum Division A.I.M.E., Los Angeles.

November

1-15—American Institute of Mining and Metallurgical Engineers Regional Meeting, Tucson, Arizona.

14—Society of Automotive Engineers, Annual Dinner, Commodore Hotel, New York.

14-18—American Petroleum Institute, 19th Annual Meeting, Stevens Hotel, Chicago, Ill.

MAPS
Large map of Los Angeles Basin oil fields and map showing all California oil fields. Price $15.00 each on paper and $30 each on cloth. Individual state oil and gas maps of Mid-Continent and Rocky Mountain regions. Maps show geological cross sections at base. These maps indicate wells drilling, wells producing and abandoned, with depths.
All maps revised up to date of purchase.
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The A. P. I. estimates that summer travel spending will reach four billion dollars this summer.

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